

# Backwoods



# Home magazine

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*practical ideas for self reliant living*

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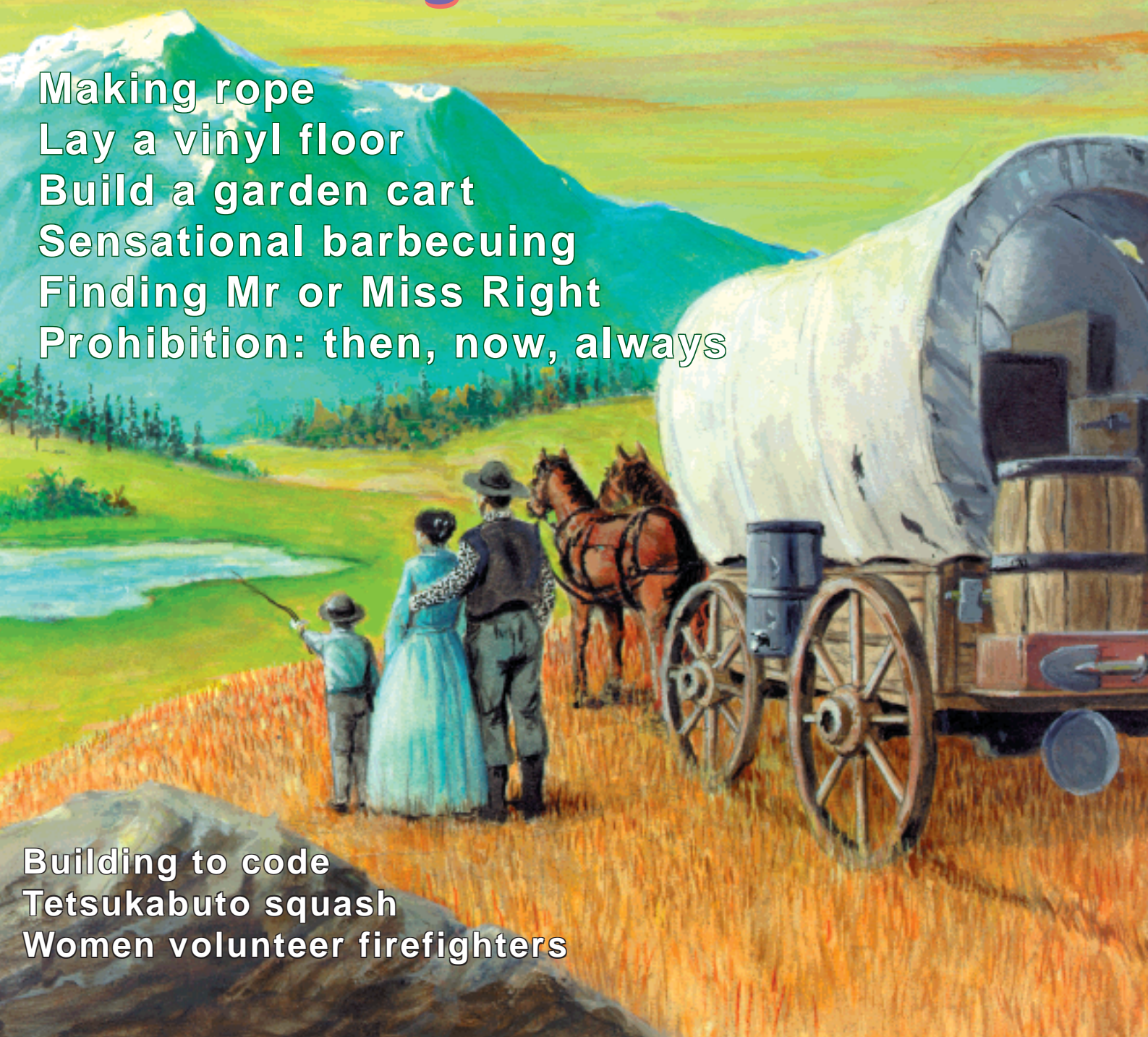
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## If you build your own (legal) house, you'll have to deal with the permit process

*By Skip Thomsen*

**P**ermits have become a way of life. Some of the permits required in the building process are more-or-less justifiable, but others fall into the categories of create-a-job and revenue collection. The bottom line is that we all have to deal with this system to some extent, and it's a lot easier when we know what to expect and what's expected of us.

### The building code

A few years ago, the building code was in place mainly to insure that structures would be built to last, that joists and beams were of sufficient size to do their intended jobs. That's history. Now, mostly because of our country's flair for insane lawsuits and because of the legislative clout of the consequently paranoid insurance companies, the building codes for most states reach out into areas in which government has little legitimate concern. In addition, the successful lobbying efforts of many major suppliers of building materials account for lots more of the current rules.

If you live in a spot in the U.S. where it is still (more or less) legal to build a house on your own land without some bureaucracy's esteemed permission, you'd better get on with it before it's too late.

Having some familiarity with the building codes and how they are applied in your area is central to avoiding a lot of hassles during your permit process.

Before you get serious about even designing your (legal) house, you'll want to become familiar with your state's uniform building code (UBC). You can sidestep this process if you



are already familiar with general building regulations, and if the structure you plan to build is fairly conventional in design. Even so, it wouldn't hurt to get a copy of the latest addenda. For most states, the UBC is from 1000 to 2000 pages of rules and regulations governing exactly how you must build your house—right down to how much room you must leave in front of the toilet.

The UBC will tell you how many windows you may have, whether or not good old aluminum-frame windows are still legal, whether or not skylights are legal in your area (believe it or not), how much insulation you must install and how and where you must install it, what your exterior doors must be made of, and all sorts of other details to stifle your creativity.

Of course, the folks at the building department will tell you that the rules are not intended to stifle creativity,

complicate construction, or raise costs; they are there to protect us. Too bad we don't have the option of signing a waiver that releases the bureaucracy from its perceived obligation to protect us, in exchange for our freedom to make some of our own decisions.

If you need to consult the state UBC, you might wish to do your research at the library. The volume is very expensive and is hardly a practical purchase if you just plan to build one house. First, find out when the latest revision was published, and make sure that your library has it. Significant changes sometimes happen from one revision to the next, and there's no point looking at an obsolete book. In some areas, many of the newest changes to the rules can be sidestepped by submitting plans that are signed off by an engineer or architect. Do your research.

## Meet your building inspector

It wouldn't hurt at this point to go introduce yourself to your local building inspector. This is the person who will inspect your building as it progresses to make sure you're not cutting any corners and are doing everything according to local codes. Show him (or her) a rough sketch of the house you plan to build and ask if there is anything out of the ordinary that you should know about that might apply to a building like the one you're planning. If any unusual design features are in your plan, make sure that they are easily recognizable in your sketches. Ask about any relevant recent code changes that might affect you.

Some building inspectors are happy to help and encourage owner-builders. Others prefer to work with contractors who won't bother them with questions about anything, and they feel that owner-builders are a pain. Some areas of the country actually have separate owner-builder codes designed to be friendlier to those who don't have the resources, skills, and equipment available to most contractors. Be nice to your building inspector.

## Your house plans

If you are planning a more-or-less conventional building—one that looks like others in the area—you're safe to go ahead and draw up your basic house plans. Structures that include unconventional details like fabricated girders, unusual cantilevers, and such will usually need to have the plans approved and signed off by a structural engineer or architect licensed in your state. This just means that after you draw up your plans, you will need to have an engineer or architect check them over, and if everything is in order and you've paid his fee, stamp them as approved. If you are particularly unsure about a certain detail you plan to incorporate into your structure,

talk to the engineer first. It will save you having to do it over and paying him twice.

## The permits

In the course of building a house, there will be several permits required, and knowing the order in which they are needed can save a lot of time and hassle over the course of building your home. Almost all of the permits involve an inspection process as well, and the timing is again central to the efficient flow of progress. This is especially true if you are hiring any of the work done, but it applies to the owner-builder, too. I've heard more than a few gripes from owner-builders who were sitting on their thumbs waiting for the bureaucracy to do its thing while the first snowfall was coming closer and closer.

Generally, the permits for residential construction are the following. (Not all are applicable in all cases.)

- Land use permit
- Building permit
- Electrical hookup, temporary
- Electrical, permanent
- Plumbing permit
- Water hookup (public water system)
- Sewer connection
- Septic system permit
- Mechanical permit

## Inspections

Each permit initiates at least one inspection process. It's a good idea to make appointments with inspectors a little ahead of when you'll need them on the job site. Most will be available only on certain days of the week, and a little planning on your part will insure that your job won't be held up any longer than necessary waiting for inspections.

**Inspection schedule** (Not all inspections are applicable in all cases.)

**Site prep:** After any foundation concrete forms are in place, but before the concrete is placed in them, an inspection of reinforcing steel, footing sizes, form sizes, and placements, and in some cases, proximity of forms to set-backs.

**Foundation:** After foundations are completed and all forms removed, but before any subfloor construction is started, an inspection of the quality of the concrete itself, placement of anchor bolts and other necessary hardware, electrical and plumbing accesses through the foundation (where applicable).

**Subfloor framing:** After subfloor framing is complete, but before any decking is installed, an inspection of the framing lumber dimensions, any necessary steel reinforcements, and adherence to approved blueprints.

**Subfloor plumbing:** An inspection of all subfloor plumbing, before any decking is installed.

**Rough framing:** When all framing, roofing, exterior wall-sheathing, vapor-barriers, and windows are in place, but before any interior walls or ceilings are covered, a general inspection to check for adherence to approved blueprints. Special attention is paid to all structural-member dimensions and general quality of workmanship.

**Rough plumbing:** After all rough plumbing is installed, but before any of it is covered, an inspection of adherence to code practices.

**Mechanical:** After any furnaces, fireplaces, ventilators, range hoods, and any related duct-work are installed, but before any are covered, an inspection of adherence to code requirements.

**Rough electrical:** After all rough wiring is in place, but before any of it is covered, a visual inspection of adherence to code practices. Emphasis on visual here, because if you're doing

your own wiring, now is the time to make certain that it's all done right.

**Insulation:** After all wall, ceiling, and floor insulation is in place, an inspection for correct "R" values, correct installation procedures, and installation of any vapor-barriers called for by the local code.

**Finals:** After all interior walls are properly covered and finished, and all (permanent) electrical appliances, outlets, and switches are installed and tested; and after all plumbing fixtures are installed and tested, the following final inspections will be necessary before the building inspector will sign off the permit:

- Electrical
- Plumbing
- Mechanical (where applicable)
- General inspection by the building inspector.

And as if that isn't enough to deal with, some building departments also demand a final survey, which means that you will have to hire a surveyor or engineer to come to the job site and measure the distances from any foundations to the nearest lot and/or setback lines, and prepare drawings acceptable to the department. This is to assure the building department that you didn't move your foundations between the time the building inspector made these measurements the first time and when the building was completed. At least that's the only reason I can think of for this expensive redundancy.

## **The building permit**

When you apply for your building permit, you'll find out if your area is one that requires a land-use permit first. If so, the building department will advise you where and how to obtain it. Land-use permits are required in some rural areas and are mostly about keeping rural land rural.

In the blueprint package you'll submit for approval (after receiving your building permit), you will need a plot plan that shows exactly where the building will be on the property, and how close it is to the setbacks. Setbacks are the distances any buildings must be from the property lines. On a parcel of land that is several acres or more, the setbacks aren't as critical because you won't likely be building very near a property line anyway. On smaller parcels, the setbacks become more important.

Another consideration regarding where you may or may not put your house is an easement. If your deed specifies any easements, look them over carefully for restrictions.

Some building departments also require a professional (read: "expensive") survey to verify that your property is exactly as described in the legal description. Other information usually required on the building-permit application is the estimated cost of the building (on which the fee is usually based), the names of any contractors you plan on using, and the square footage of the building.

When you apply for your permit, you will be told how many sets of plans are required. Ask also what size the plans must be and to what scale they need be drawn. Some agencies are more particular than others about these things, and will reject your plans without even examining them if the rules aren't followed to the letter.

If there is a problem with the plans, the building official will discuss it with you; and when it's fixed, you'll get your approval. Depending on how things are done in your county's building department, resubmitting plans after corrections might be enough of a hassle that you will want to take every measure to get them right the first time. Some building departments will do a fix right on the spot, and others require another fee and more waiting until the right people can get around to checking your corrections.

If your building project will be using a septic system or a cesspool, the necessary permits should be obtained as soon as possible. The building department official will direct you to the right places to obtain these.

## **The house plans**

Your plans should include a drawing showing all electrical facilities, including the locations of all outlets, light fixtures, refrigerator, disposal, dishwasher, water heater, etc. A copy of this drawing is what you will use to secure bids from electricians if you will not be doing your own wiring.

The plans will also show the locations of all plumbing fixtures, including tubs, showers, toilets, disposals, washers, and anything else that will have plumbing running to it. This is the drawing you will use to get bids from plumbers, if applicable.

Some areas do not allow us mere mortals to plumb or wire our own homes. If you will need to hire contractors for these jobs, it's a good idea to submit your drawings for bids before you get very far along with construction. That way, you might get the help when you need it. Any time you get a contractor to do something like wiring or plumbing, he will generally be the one to secure any relevant permits and inspections. This is another good reason to talk to him as early as possible, and when you do, get very clear on who is going to get the permits.

## **Independent energy considerations**

If you are building beyond the power lines and are going to install your own electrical system, consider a safely assembled, temporary hookup of your equipment before you start construction. If a photovoltaic array is to be part of the plan and is not going to be mounted on the house, having it installed prior to construction is a good idea. Otherwise, at least assem-

ble your batteries, inverter, and back-up generator in such a way that you don't need to run the generator all the time. Run the generator only for power tools big enough to require its use, and have the batteries charging at the same time, so that your small power tools can be run off the batteries through the inverter.

However you set up your temporary power system, install it in an enclosure that will allow plenty of ventilation and protect the equipment from the elements (and from tampering, if applicable).

If you're going to hire an electrician, be sure to talk over your independent energy system before even asking for a bid. Some electricians welcome the challenge of something different and innovative; others want to stick with what they already know how to do. Find one who encourages the use of independent energy. Also, be sure to tell the building department right up

front that you intend to install your own power system. That's always good for a laugh.

### **The rest of the permits**

There's not much more to getting the rest of your permits than just appearing at the right agency and paying your fee. Have your building permit and blueprints with you, and don't forget your checkbook. If the legal description of your property does not appear on the blueprints (it usually doesn't) take that with you, too.

A possible variable is if you are far enough from the existing utility facilities that a service-extension is required, and then it usually comes down to that checkbook again.

Another variable can come up if there are any environmental restrictions on septic systems. If you plan on building anywhere near a stream or

other body of water, look into this carefully right up front.

That about wraps up the permit process. Some building officials (and departments) are very agreeable when it comes to working with owner-builders. Others are not. If you happen to get involved with some officials who appear to be of the latter persuasion, give 'em a break. A big smile goes a long way toward the start of a good relationship with your building officials. And at the risk of being called sexist, I'll just say that I have heard of several times when the sweet smile of a lady got an approval for the same issue that her macho ol' man was turned down on. Happy building!

(This article was excerpted in part from the author's book, The Modern Homestead Manual, which contains a chapter on every aspect of building your own home. The book is available from *Backwoods Home Magazine*)  
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## Get low-cost, high-quality lumber by investing in an inexpensive planer

By Robert L. Williams

Most adults have heard the advice that you must spend money to make money, and the dictum is true. However, there is another side of that particular coin, which I had just invented. It says that to save money, you must spend money.

The reference I have in mind here is a recent investment that I made. We are constantly at work on some project or another for the house or outbuildings. We have a 40-acre farm, most of it in semi-destroyed woodland. So when I want lumber, I usually hook a chain to a fallen but living tree, cut the tree loose at the stump, top it, and then drag the log to the back yard where I butcher the tree trunk into usable chainsaw lumber.

The lumber straight from the chain saw is usually good enough for the uses I have in mind for it, but now and then I need some truly great lumber for special projects that won't tolerate jagged edges and rough surfaces. At that point I must resort to a planer to get the best possible lumber for my work.

I also feel that the planer is the sort of investment that will pay for itself within a matter of hours.

So I put it to the test. Like many Backwoods Home Magazine readers, I suspect, I am not overloaded with money, and even if I were I would not want to pay a lot of money for something that would yield only minimal returns.

So I shopped around for a planer large enough to do the job and small enough to be affordable. I settled on a Collins Quality 12-inch Planer. The cost was slightly more than \$200. Before I made the purchase, I did some calculating on how much lumber

it would take for me to earn back my investment.

Here's what I learned. (And, along the way, we made a brief study on how cheap our wages were, in terms of how much lumber we received in exchange for the amount of work involved.)



*We started by halving the log and then sawing boards from the halves. Here is Robert III with the first board he cut from the log. Even though in the photo it looks smooth, up close you can see rough spots. And mine were much worse.*

### Figuring our costs

In preparing this article, we used a stop watch on each and every piece of lumber cut, and we measured out gas and bar oil with a graduated beaker so that we could know precisely how

much money and how much time we spent.

The first part of this unscientific study was conducted with the aid of a traditional chain saw, no attachments of any sort used at any time, and with a badly dull and worn chain. Then we sharpened the chain and cut again. Finally, we installed a factory-new chain and repeated the cuts, all the while timing each cut.

Here are our results, as compared with the costs of lumber at the lowest-priced builders' supply house in our area, a national chain noted for its lower-than-average prices for lumber.

We started with a huge poplar log that was 12 feet long. We cut nine boards, each of which was eight feet long. Time for the cuts with the dull chain was seven minutes per board. After the chain was sharpened, our average time was four minutes per board.

So there is the first and best argument for keeping the chain sharp. We used only a round file and stroked each tooth five light times. The second argument was that the subsequent boards were all much smoother than were the boards cut with a dull chain. The third argument was that we used significantly less gas and oil.

Then we installed a factory-fresh chain and cut the cutting time to two minutes per board. While this time cannot compare with the speed of a traditional sawmill, it's a darned good time with a chain saw.

We then devoted two minutes each to planing the boards with our portable planer. When we had completed our work, we had nine boards that were smooth on all four sides, and the surfaces were as well-dressed as any that you can buy at the lumber supply house.



*We lay the halves smooth side up and then trim off the edges. Smooth edges make the planing much easier.*

Now, how long did we work, how much did the work cost us, and how much could we have earned if we had been, for example, bagging groceries at the local supermarket at \$6.50 per hour?

Our actual sawing time was 39 minutes. If we had used a sharp chain for all the sawing, the time could have been reduced to 36 minutes, and if we had used the new chain the entire time our time would have been 18 minutes.

If we take the mid-range speeds, we'd have used about half an hour for the nine boards. We used 18 to 20 minutes total on the planer, so the entire duration was about 45 minutes or less. If we had been bagging groceries, we'd have earned \$4.86. If we add the total cost of gas, oil, and electricity to operate the planer, our total investment was \$1.12 for gas/oil mixture, 32 cents for bar oil, and, based on the kilowatt hours used by the planer compared to the entire month's bill per kw hour, we used twenty cents worth of electricity. Our total investment, then, was \$2.06, and this amount includes the gas needed to operate the tractor as we pulled the

logs from the woods and the gas needed to drive to the store to buy chain saw gas and oil.

If we add the \$2.06 to the amount two people would have earned while bagging groceries, our investment in terms of earned income plus operating costs would have been \$11.78. Keep in mind, however, that all of the gas was not used just for cutting boards. We also cut up the scraps for firewood.

Now, we have spent \$11.78, tops, to get nine boards 12 feet long and six inches wide. All boards were 1.5 inches thick. At the discount lumber house, if we had bought one poplar board that was six feet long, one inch thick, and six inches wide, we'd have spent \$11.32. That's for six-foot lengths. Ours were 12 feet long, which would have made each board worth \$22.64. Since we cut nine boards, our total value of all boards would have been \$203.76.

We did not bother with depreciation of the chain saw and wear and tear on the truck or tractor when we went to buy gas and oil and when we pulled the logs from the woods. We figured that if anyone is that concerned over economics he'd be better off not to



*We started by feeding the longer boards through the planer. A planer like ours will remove about one-eighth inch of surface wood. The finished product is not only smooth and straight but very valuable.*

buy any boards at all and just live in a tent.

## **Our savings**

Our total savings were \$192.44. If we had used a new chain (we did not deduct the cost of the chain because it will last us for days and days, even months) our time would have been cut sharply but the savings in dollars would have been nearly the same. We'd have saved a few cents on gas and oil, but nothing significant.

From another log we also cut one poplar board one foot wide and 16 feet long. This one-inch board, based on retail prices, would have cost us \$59.36, plus tax (which we did not include in the cost of buying any of the other lumber).

Then we cut 12-foot pine boards six inches wide and one inch thick. (Actually, the thickness of the board doesn't matter; you must cut the same thickness of wood, no matter whether the board is one-quarter inch thick or 12 inches thick.) Our pine boards cost



*Here are all the boards we managed to cut from the one large log.*

us \$1.23 for gas and \$.40 for oil. We did not include cost of driving to the store again or pulling the logs from the woods. We have paid that amount already and counted it. Our total cost for the nine boards was \$1.63.

Total value of the boards was based on the same dealer's retail price per board foot, which was \$1.54. Therefore each board was worth, to us in terms of savings, \$18.48, and the total value of all nine boards was \$166.32.

Then we cut oak boards six inches wide, eight feet long, and 1.5 inches thick. It took longer to cut the oak (about one minute longer per board) and it cost slightly more. Our total cost for gas and oil was \$2.58.

An oak board six inches wide (and these were essentially knot-free, as were most of our boards) would have cost me \$2.93 per board foot. An eight-foot board, then, would have cost \$23.45, so our nine boards were worth \$211.08.

We also cut 10 12-foot oak boards, worth about \$35.16 each for a total savings of \$351.60 for the ten boards.

At this point our total value in lumber cut was \$992.20. Our cost was less than \$10.

If I had been working during the time I sawed boards, I could have earned about \$50 if I had been a bag boy and \$19,896.79 if I had been a lawyer.

Is the time and energy spent in cutting boards offset by the savings? Yes,



*When we finished planing the wide surfaces, we stood the boards on edge and planed the edges.*



*The finished product, ready for use.*

in eleven languages. Not only do you save money, you also get a better quality of lumber. We did not leave bark on the edges of boards, and there were no pitch or bark pockets. The knots were few and far between. In much of the lumber there were no defects at all.

### **Was the planer worth it?**

We figured that we paid for our planer during the first day of use and had enough money left over to buy some other equipment for later work. Our big question was whether the planer would actually do the job we wanted it to do.

Again, the answer was a resounded "Yes!"

We found that even rough surfaces are planed smooth and even with only a few passes through the planer. Our work went much smoother if we took off one-eighth of an inch per pass. And the work goes much faster if the chain-sawed lumber was not pitted and gouged. Keep in mind, if you decide to follow suit, that if you let the saw get off course and make a half-

inch dip in one surface, you must run the board through the planer several times in order to smooth out the rough place.

We also found out that warped lumber is very rough to plane, because the blades will not cut the board down to a uniform size. The blades keep ripping off the high side and never touching the low side, so we realized quickly that we needed to cut our boards as accurately as possible the first time around.

Finally, when the planing was done, we dipped the ends of each board into melted wax and then stored the lumber to dry. The wax keeps the boards from cracking. When we were finished, we had enough prime lumber to complete the first projects we had in mind. And the money we saved was enough to make us feel that our planer investment was one of the best we had ever made.

Because of the improvement in our lumber, we became far more ambitious concerning future work. Recently I came up with 30 projects to do around the house, these ranging from cutting and installing flooring for one room to making picture frames and swing sets. I anticipate that it will cost me \$48.35 to complete all thirty of the projects. Total value of the projects will be well above \$5,000.

Again, is it worth it to saw your own lumber and to invest in a modestly priced planer? In a word, si, oui, jawohl, sim, and dern tootin'! Δ

*Hell hath no fury like a bureaucrat scorned.*

—Milton Friedman  
1912-

### **Imagination**

*Tree, boat, doll, dragon,  
train, clown, giraffe, birthday cake  
Children watching clouds.*

Ryan Thornsberry  
Cape Girardeau, MO



# I found that special somebody, and you can too — with safety

By Jayn Steidl Thibodeau

It might seem from reading the letters written to *Backwoods Home Magazine* that living the good life in the backwoods is not the best way to either keep a mate, or find a mate. Complaints of spouses who have been unwilling to make the transition to less-than-comfortable facilities are common, as are complaints of the inability of individuals to find a partner willing to settle into a back-to-basics lifestyle.

Some of you folks who have been reading *Backwoods Home* for any length of time have seen the articles I have written on the homesteading projects my husband and I have experienced. Mike and I have dealt with a variety of enterprises on our acreage such as sheep, goats, cattle, rats, horses, and rabbits, just to name a few.

What I haven't written about is how we came to be together—a man from northern Vermont and a city girl from Chicago—now settled in the rustic backwoods of southwestern Arkansas.

Mike moved to his homestead in 1976. He was married at the time to a lovely lady who had difficulty adjusting to the idea of hillbilly heaven. When she left for the greener pastures of L.A. (and I am not referring to Lower Arkansas), he was alone for quite a while, raising rabbits, working odd jobs, and enjoying the comfortable companionship of his faithful dog.

I was working with race horses in 1976, traveling the circuit from Chicago to Florida when my husband decided to detour to Arkansas. After a fierce battle, I acquiesced and joined him in what was, to me, an uncivilized land. But when the husband left, I stayed, and ever since have been an "Arkie" by choice rather than chance.



Of course, Mike and I still weren't together. He lived in a town that was little more than a hole-in-the-wall two hours south of my chosen location of Hot Springs. So what destiny brought us to meet?

A newspaper ad in a publication that neither of us normally read. You know, one of those supermarket tabloids that you hide under your coat in the check-out line so that no one will see you with it.

One of Mike's neighbors had encouraged him to place the ad, and one of my neighbors, listening to me moan about the dearth of decent men in my life, had pointed out Mike's ad and told me to answer it.

"Take a chance," she had told me.

I did. We wrote for two months before we met, and we were married three months after our first meeting. That was in March of 1984. Thirteen years later, we are still waiting for our first argument. (By the way, his neighbor was the best man and mine was the matron of honor.)

Homesteaders today have an easier time meeting people. The internet has spawned quite a few relationships during its short lifespan. Groups which focus on sustainable agriculture and homesteading sponsor workshops and seminars where numbers of people get together to learn and discuss ideas on

those topics closest to their hearts. And this magazine, which didn't even exist back then, has a "personals" section where advertisers can reach readers with like interests. All of these are great places for a single to meet the perfect person with whom to share a homesteading life. No matter which method you choose, there are a few things you should keep in mind, for safety's sake.

- If you are writing letters, **use a post office box** instead of a street address. Unfortunately, there are a lot of crazies out there in the real world. You don't want to invite trouble by letting some idiot know where you live.

- **Talk on the telephone** if you can, but remember that a street address can be tracked down through a telephone number. It is best to be certain of the people to whom you give your number.

- **Screen your new friends.** If you are writing letters, ask the same question in consecutive letters, and compare the answers. Mike received 40 replies to his ad, and had thrown most of the letters away by the third reply because of inconsistencies that seemed suspicious. If you are talking on the telephone, listen to background noises, and compare your telephone conversations to the letters you receive. It is hard to keep important subjects (like a husband or wife) consistent unless you are telling the truth.

- **When you meet, do so in a public place.** (We met for the first time in a restaurant and sat over cold coffee for four hours.) A friend disregarded this advice, falling head over heels for a fellow she had met through a popular equine magazine. When they decided to meet, she invited him to Arkansas ...and he proceeded to move in, jobless and broke, for three months. It took nearly an act of Congress to evict him from her home.

- **Arrange your own transportation to and from the place where you meet,** and make sure someone knows where you are and when to

expect you to return. An even better idea is to arrange to meet the person at a friend's house or a family gathering. Sometimes another person will be able to spot trouble signs that you alone might miss. And while someone can cover a character flaw in one public meeting, meeting with a group several times should give you a pretty good idea of the type of person with whom you are dealing.

• **Don't rush things.** If you want to get married, that's fine. But wouldn't you rather marry Mr. or Ms. Right-for-You instead of just anybody—even if it does take a little longer?

• **Be honest.** That seems like it shouldn't even have to be said, but it seems like honesty is something that many relationships are sorely lacking. If you are 50 pounds overweight, don't hide it in your letters. If you hate dogs and you lie about it, you could

wind up with someone who dreams of raising Rottweilers. And if you can't stand kids, you'd be miserable with someone who wants a large family. So tell the truth and suffer the consequences. It's better to bring all your cards out into the open and lay them on the table instead of trying to bluff your way through a relationship.

• **Be prepared to compromise.** When Mike and I got married, I loved animals and had worked with horses for half of my life, but I didn't know the front end of a cow from the back end. And I was real concerned about the idea of raising animals for meat. Mike was concerned about my passion for the arts since we would live in the boondocks and there just wasn't much of cultural interest in the area at that time. He also knew that I wanted to return to college, an impossibility at that time in that location. We con-

fronted these problems and others that arose head-on, talked them out, and we both learned something in the process. Today, there is not much I can't do with a cow, the arts community in our area has grown to a comfortable level, and I am back in college.

Life in general is a growing and learning experience. Finding the right person to grow and learn with is the frosting on the cake. Mike and I were lucky to have found each other and to have been able to adapt and enjoy each other's very different lifestyles.

But then, homesteading is about adapting to a different lifestyle. It's about dedication, learning and listening, compromise, and hard work. And I guess that gives just about any homesteader an advantage in building a lasting relationship. Δ

## The marvel of baking soda

*By Richard Bauman*

Is there anything baking soda can't do? A box full of baking soda is like a box full of magic.

In a single box of baking soda you get a deodorizer, cleaning agent, first aid product, toothpaste and mouthwash, fire extinguisher, and an antacid. And you can cook with it too.

Not only is baking soda versatile, it is safe and virtually harmless.

Because baking soda is a natural buffer, it can neutralize both acids and alkalines. This uncommon property makes it useful as a cleaner and hygiene product.

As a tooth powder baking soda neutralizes mouth acids that promote tooth decay. Its mildly abrasive action can make teeth sparkle. Dissolve a little baking soda in a half-glass of water and you have an instant mouthwash.

Many doctors recommend using a paste made from baking soda and

water to soothe the pain, inflammation and itching of insect bites and stings.

A severe sunburn can be cooled by bathing in a tub of warm water with a few tablespoons full of baking soda added to it.

A half-glass of water and a teaspoon of baking soda can do wonders for acid indigestion or an upset stomach.

Baking soda's cleaning ability is hard to beat. It does some jobs other products can't touch. For instance, nothing cleans automobile battery terminals like a mixture of baking soda and water. A damp cloth and some baking soda easily removes bird droppings, spattered bugs, and other stubborn residue from your car's finish.

Where else can you use baking soda? How about on plastic surfaces, colored tile, stainless steel, and chrome finished items in your home. They will sparkle after treatment with baking soda and a damp cloth.

Baked-on food residue in pots and pans practically floats away when you

soak them for a couple of hours in a solution of warm water and baking soda.

Nearly every one knows that an open box of baking soda in the refrigerator soaks up odors like a sponge.

Light, fluffy pastries and cookies get that way because recipes call for baking soda. It doesn't affect flavor but gives off carbon dioxide gas when heated, causing bubbles in the dough and making it "airy."

Keeping a box of baking soda near the stove is a sound idea. In case of a grease fire, tossing a couple of handfuls of the white powder on to the flames will usually put them out in a hurry.

Have you ever spilled something in your oven and had it smoke and smell? Sprinkle some baking soda on the smoldering stuff to stop it from smoking—and it makes clean-up easier, too.

There are literally hundreds of different uses for baking soda. You'll look long and hard for another product that can do so much, cost so little, and is so safe to have around the home. Δ



# Lay vinyl flooring the foolproof way

By Oliver Del Signore

“Hey, honey, what do you have planned this weekend?” It was my wife, Martha.

“Why do you ask?” I queried non-committally.

“You said you were going to finish the mud room after Christmas. It’s the middle of January. Don’t you think you should get started?”

I really wasn’t in the mood.

“Hon, I’d love to get started, but how can I possibly carry in the paneling and stuff with all the snow on the

## 12 foolproof steps:

1. Measure the room
2. Buy the materials
3. Prepare the room
4. Clean the floor
5. Make the template
6. Level the floor
7. Cut the floor covering
8. Sand the leveler
9. Fit and trim the flooring
10. Glue the flooring
11. Roll the flooring
12. Clean up

ground. Besides, there is no place to set up horses to cut on. Surely you don’t want me to do it in the parlor or the kitchen.”

I had her now.

But suddenly, she appeared in the doorway. “No. But you can put down the vinyl flooring can’t you? And I have a great idea. How about teaching me to do it? It’s about time I started learning to do some of these things. We can work together. It’ll be fun!”

I groaned. My enthusiasm knew no bounds.

There are 12 steps to successfully laying sheet flooring—which is another term for continuous roll vinyl flooring, as opposed to tiles.

## 1. Measure the room

The first step is to measure the room. You want to measure the length, at the longest point, and the width, at the widest point. In a kitchen, for example, where the layout will be very irregular due to cabinets and appliances, you need to mentally expand the room until it becomes a rectangle whose sides meet all the widest points. [Figure 1]

Our tape measure told us that the mud room was 11' 4" by 4' 5 1/2".

## 2. Buy good vinyl

Sheet flooring can be purchased from rolls that are either 6' or 12' wide. The greater selection of patterns is found in the 12' wide size, especially if you’re willing to purchase stock patterns rather than wait for special orders. With measurements in hand, we headed out to our local building supply store.

There are a number of manufacturers of vinyl flooring and each produces several different grades of flooring. While price is often a consideration, you get what you pay for.

Most vinyl sheet flooring consists of three layers. The bottom layer of felt is what gets glued to the floor surface. The middle layer, made of vinyl, is the one imprinted with the pattern or design. The clear top layer, called the wear layer, is made from urethane or vinyl and is the most important since it is the one that takes all the abuse.

The major difference between grades of vinyl flooring lay in the overall thickness as well as the thickness of the wear layer. The higher the traffic, the thicker you want the wear layer to be. On

## Materials/tool list

Building felt, pattern paper, or installation kit  
2" wide masking tape  
Tape measure  
Heavy scissors  
Utility knife  
Flat trowel  
Floor leveling compound  
Mixing bucket  
Stick for mixing  
Notched trowel  
Adhesive  
Vacuum cleaner  
Crayon  
Pencil/pen  
100 grit sandpaper  
Hand roller/rolling pin  
**May also need:**  
Hammer  
Ring shank nails  
Dividers  
Carpenter’s saw  
Chisel  
Staple gun  
3/8" or 1/2" staples

many self-stick floor tiles, the wear layer is about the thickness of plastic kitchen wrap, while on sheet vinyl it can be as much as 20 times thicker.

Four grades were offered by our supplier. Each grade offered its own distinctive patterns. Typically, the pat-

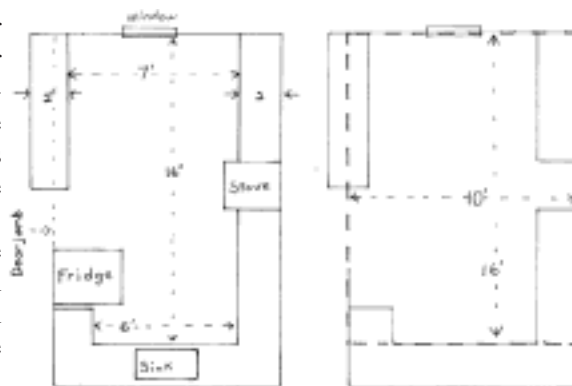


Fig. 1. The layout of a typical room and the actual size of sheet flooring required to lay vinyl in it.



*Fig. 2. Remove baseboard quarter-round moulding or vinyl wall base with a tool such as a putty knife.*

terns of one grade cannot be purchased in other grades. For reasons of cost verses quality, we chose a pattern from the second best grade. Had we been laying flooring in the kitchen or a bathroom, we would have chosen the best grade, even if we would have had to order the flooring to get a pattern we liked. I avoid the lower grades at all costs, having had the experience of seeing how quickly they can deteriorate. I would rather pay double the amount per square yard and lay something that will last for 10 or more years than to have to replace a cheap product when it starts to wear out in two or three years.

You are going to want the sheet of flooring that you purchase to be several inches wider and longer than the room dimensions, to allow for trimming it to a precise fit. Many suppliers do this anyway, but make sure yours does, even if you have to pay extra. In addition, when they roll the piece up after cutting, make sure they roll it with the pattern out to prevent any creasing or tearing of the backing or marring of the finished surface.

Along with the flooring, we needed several other items: floor leveling compound, adhesive, a notched trowel and some masking tape. The other items—a flat trowel or very wide putty knife, a pair of heavy duty scissors or metal shears, a small bucket in which to mix the leveling compound, and a utility knife—we already had at home.

### 3. Prepare the room

All furniture and moveable appliances and fixtures should be removed from the room to be covered with the new flooring. In the kitchen, the refrigerator and stove can usually be moved with little trouble. In a bathroom, removing the toilet will allow the new flooring to go under it, resulting in a neat, more attractive job and a much easier installation. Steam radiators that stand on the floor should be removed as well to prevent having to make cutouts for each foot.

The job will also be easier and look neat if you can tuck the edges of the flooring under baseboard and door mouldings. You should remove any baseboard quarter-round moulding or any vinyl wall base with a putty knife, thin screwdriver, or similar tool. [Figure 2] Make sure you pull out any nails that remain in the baseboard itself so they will not get in the way when you lay down the flooring.

To prevent having to make complicated, precise cuts on the part of the flooring that will go around door mouldings, you can cut out the bottom of the door mouldings with a carpenter's hand saw held flat, right at floor level. [Figure 3] This will allow the flooring to slip under the moulding. Make sure to remove all the sawdust and wood chips that remain under the moulding with a thin screwdriver or chisel and by vacuuming.



*Fig. 3. Cut out the bottom of the door mouldings with a carpenter's hand saw held flat, right at floor level.*



*Fig. 4. Fastening parallel strips of felt with triangular pieces.*

If you will be applying new flooring over old sheet flooring or tiles, you will have to remove every trace of wax or floor finish to allow the new adhesive to bond properly. Any loose or missing tiles should be replaced with tiles of the same height. Now is also a good time to check for loose or squeaky floor boards, which can be tightened by nailing them down into the floor joists or subflooring with ring-shank floor nails.

Fortunately, we did not have to worry about any of that since we were applying our sheet vinyl over a new plywood floor and we had not yet installed any mouldings.

### 4. Clean the floor

During the course of the installation, we cleaned the floor several times. Removing all dust and dirt from the floor is important to allow the leveling compound and the adhesive to bond well. This also prevents tiny bumps which can cause the flooring to wear prematurely.

### 5. Make a template

The salesman had offered to sell us an installation kit. Such kits make laying out and cutting the flooring virtually foolproof. With them, you make an exact template of the area to be covered, which you will use as a guide to cut the flooring.

The kits often come with a guarantee that offers to replace ruined flooring if you follow the directions and still mess it up. Of course, if you fol-





*Fig. 5. Tucking the pieces of felt under the threshold.*

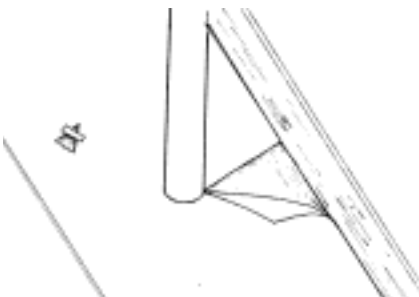
low the directions you *can't* mess it up, so I don't imagine they have much to worry about. If you are doing a large floor, they are a good investment at \$15.

However, since this was a relatively small, rectangular installation, I decided to use a roll of building felt I had down the cellar to make the template. You could use other materials, such as a large roll of heavy paper or even sheets of paper that you tape together.

After vacuuming the area well, we made our template out of several pieces of felt that we fitted to follow the lines of the room. Here's how we did it.

First we cut a strip of felt several inches shorter than the length of the room. We set it in place along one long wall, making sure to keep it about  $\frac{1}{32}$ " away to make it easier to remove the template when completed. A second long strip was cut and applied parallel to the first on the opposite long wall. The two were taped together to prevent movement.

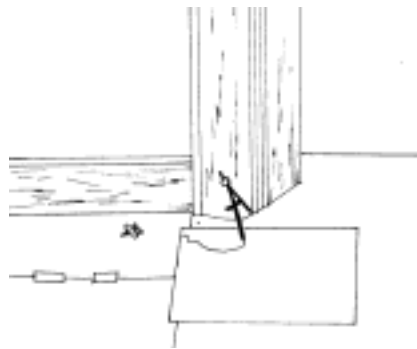
In a larger room, where the two strips did not overlap, we would have



*Fig. 6. Cut the felt to slip it around pipes or radiator legs.*

fastened them to the floor by cutting several small triangles in the felt and taping across them. [Figure 4] We would then lay parallel, overlapping strips to fill in the space between the two starter strips, taping them to each other as we went along.

On one side, we noticed the wall angled out a bit. Cutting several small strips, we placed them so they followed the wall in that area, taping them in place as we went along. We did the same at both ends, making sure that the strips of paper matched the angles at the corners. At the door end, we remembered to tuck the pieces under the threshold [Figure 5] and we would have done the same had there been any door mouldings to go under.

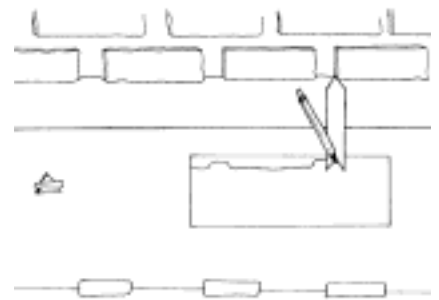


*Fig. 7. Trace outline of moulding onto felt. Cut to fit.*

Some installations require you to fit the flooring around the door threshold or moulding, or around pipes or along other irregular objects such as stone or brick walls.

The threshold is easiest. We would have cut the pieces of felt to follow the outline. For pipes, or radiator legs, [Figure 6] we would have cut the felt to slip around it, then cut out an opening the exact size of the object.

For a door moulding, stone wall or other irregular object, we would have used dividers to trace the exact pattern on a piece of felt. [Figure 7] After cutting it out with scissors, we would have fit it in place and taped it down. If you do not have dividers handy, you can use a popsicle or similar small stick and a pencil or pen. Sharpen one



*Fig. 8. Tracing the outline of an irregular moulding or wall.*

end of the stick and cut a V notch in the other end. Place the tip of the pencil or pen upright in the V groove. Keeping the stick perpendicular to the moulding or wall at all times, trace the outline of the object onto the paper [Figure 8] then cut and tape in place as above.

With all the pieces cut and in place, we double checked to make sure all were securely taped, then we carefully lifted the template, starting at the corners and folding in, until we could lift it and carry it out of the area.

## 6. Level the floor

It is essential that the floor you are covering be smooth, with no bumps or depressions. Modern sheet flooring is notorious for following the contours of such imperfections. A slightly elevated nail head becomes a bump that wears through quickly, while small gouges, or the joints between pieces of plywood, become visible depressions or lines.

Prior to applying the compound, we ran the edge of the flat trowel over the whole surface, to check for high spots



*Fig. 9. Apply the leveling compound with a trowel.*



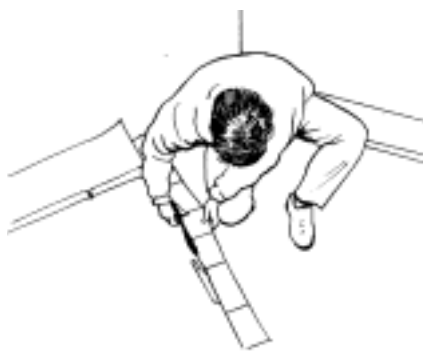
*Fig. 10. Tape the template to the flooring.*

or raised wood grain, which can be sanded down and for high nail heads, which were pounded down. After that, we vacuumed again, then carefully followed the mixing and application instructions on the box of leveling compound.

My wife applied the compound with a flat trowel, although she could have used a wide putty knife instead. She started in the far corner and troweled the compound over every nail head, crack in the wood, seam between sheets and every other depression, smoothing it as she went along. [Figure 9]

At one of the joints, we noticed that one piece of plywood seemed higher than the other and that the gap there was almost  $\frac{1}{8}$  inch wide. We did that joint first, knowing that we could not get it perfect with the first pass, and that we would have to come back to it for a second coat after we had finished the rest the floor.

The box said it would take about 30 minutes for the compound to set and dry, but I knew the chilly temperature



*Fig. 11. Cutting the flooring.*

in the room would cause it to dry much slower. That was okay though, since it was lunchtime.

## 7. Cut the floor covering

There are several ways to cut vinyl flooring, but the one I like best is to use metal shears or a pair of heavy scissors. Knives of any kind can slip too easily creating a problem. Shears give you much more control. However, they must be sharp otherwise you can wind up with ragged edges.

We chose a spot in the parlor where we could lay out the roll of flooring we'd bought, then got our felt template and positioned it on top.

We were careful to align the long, straight side to follow a straight line near the edge of the pattern, leaving a strip to trim off. In most installations, there will be one long wall or group of cabinets where the floor is more visible than other places. Keeping the pattern square to that line will make the whole job look better.

Once satisfied with the position of the template, we taped it to the flooring. [Figure 10] Then, we were ready to cut.

My wife did the cutting, and being right-handed, she started on the left side and worked counter-clockwise around the piece, being careful to cut right at the edge of the template. [Figure 11] In a few minutes she was done. We removed the template and, to avoid confusion later, we marked with a piece of tape the end of the flooring that would go by the door.

For pipes and radiator legs, first cut out the area, then make a straight cut to the closest edge so that the flooring can slip around the object. [Figure 12]

More often than not, the piece of floor covering will be too large to lay out flat in the house without first clearing an entire room of furniture. When that is the case, you can lay the sheet of flooring out on a freshly swept driveway or patio. If none of those are options, you can ask the



*Fig. 12. Cutting the flooring to fit around pipes and radiator legs.*

building supply store, at the time you buy the floor covering, if they have a space you can use, or even inquire at a local church or function hall.

## 8. Sand the leveler

Unless you are very lucky, or extremely talented, there will be some slight ridges or drips of leveling compound that you missed with the trowel. Even when I don't see any, I like to take the time to run the edge of the flat trowel over the floor, because I can find the imperfections better by feel than by eye. Often, the ridges or drips will be scraped down by the trowel edge. Sometimes, however, they will need to be sanded down. I generally



*Fig.13 Use a crayon to mark the edges that need trimming.*



use 80 or 100 grit paper and I always wear a dust mask.

My wife checked the whole floor and sanded down the imperfections, then told me I could do the vacuuming. When I finished vacuuming, I got a clean, white rag, dampened it with paint thinner and went over all the areas that had been sanded, to pick up any dust the vacuum might have missed.

## 9. Fit and trim flooring

With the surface now clean, we got the piece of flooring and set it in place. With luck, it would fit perfectly. Of course, no piece I've ever installed has fit perfectly on the first try and this one was no exception.

We checked around the whole perimeter, and marked the areas that needed trimming with a crayon. [Figure 13] Then she used the shears to carefully snip off the offending pieces, making sure to remove the trimmings so they would not end up under the flooring to cause bumps. In a few spots, where the amount to be removed was very thin, I used the utility knife to carefully shave it.

## 10. Apply the adhesive

The moment of truth had arrived. It was time to glue it down. I stood at one end while she carefully lifted the other. She started at the corners, folding and lifting in toward the center until she could fold the sheet back, exposing half of the floor. [Figure 14] She was careful not to crease the backing and was especially careful to make sure the fold remained well rounded.

Most flooring adhesive is applied over wood subfloors with a trowel that is notched 1/16" deep by 1/16" wide by 3/32" apart. Nonporous subfloors, such as concrete, usually require a trowel with notches 1/32" deep by 1/16" wide by 5/64" apart. There are exceptions, though, so you should inquire about the proper adhesive and



*Fig. 14. The correct method to lift the flooring, to apply the adhesive, while being careful to avoid damaging it.*

trowel for application when you purchase the flooring.

She took a glob of the adhesive out of the can with a stick and plopped it on the floor. Working from the end toward the middle, she did the edges first, setting the trowel at the joint of the floor and wall and troweling it in toward the center for 6 or 8 inches. Keeping the trowel nearly upright along the notched edge, to ensure the proper amount of adhesive being applied, she filled in the center with long wavy strokes until the whole area was covered.

Some manufacturers recommend that the edges of their product be fastened with staples instead of adhesive where ever possible. Your supplier will be able to tell you the proper installation procedure for the product you purchase—either all adhesive, adhesive in the middle with staples around the edges or staples only.

Now came the tricky part—getting the flooring back down smoothly. The best way is to simply reverse the process of lifting it up. Holding the corners up and in, she slowly let it roll back into place, shuffling her feet along the center to bond it and eliminate any air bubbles. Since the edge had to go under the threshold, she stopped about two feet away, knelt down, folded the leading edge slightly and placed it under the lip, then carefully worked it under by gently pushing and rubbing from the already bonded area towards the door. Next, she rubbed outward from the center

line towards the side edges, to smooth those.

Finally, she lifted the other half and repeated the above procedure.

## 11. Roll it out

The next step is an important one. The flooring must be rolled to eliminate any air bubbles that might have been trapped as the floor covering was being laid and to ensure that the whole floor is pressed firmly onto the adhesive.

This can be done in two ways. Ideally, you have a 100-pound floor roller or a hand roller tucked in a closet somewhere. Since that is rarely the case, a kitchen rolling pin will do nicely.

Always starting at the center line, she rolled out towards the edges, going over each section two or three times. She then rolled the entire floor twice, going over each spot in two different directions.

## 12. Clean up

Most adhesives can be cleaned, while still wet, with a damp, soapy white cloth. Once dried, use a white cloth dampened with charcoal lighter fluid, taking care to provide proper ventilation and to extinguish *all* flames and smoking materials before using. Check the directions on the adhesive can for specific instructions.

"Ahhhh..."

I settled into the chair at my desk, flipped the switch to turn on my computer and waited patiently as it booted up, anticipating an enjoyable evening of online conversation and games.

"That was fun, honey," she said, poking her head in the door. "You really are a good teacher you know and I feel so excited at having done a project like that by myself."

She did look happy, I had to admit.

"Hey!" she said, suddenly looking even happier. "What do you have planned for next weekend?"

Uh-oh. Δ

## Make your own ulu — it's the ultimate backwoods knife

*By Rev. J. D. Hooker*

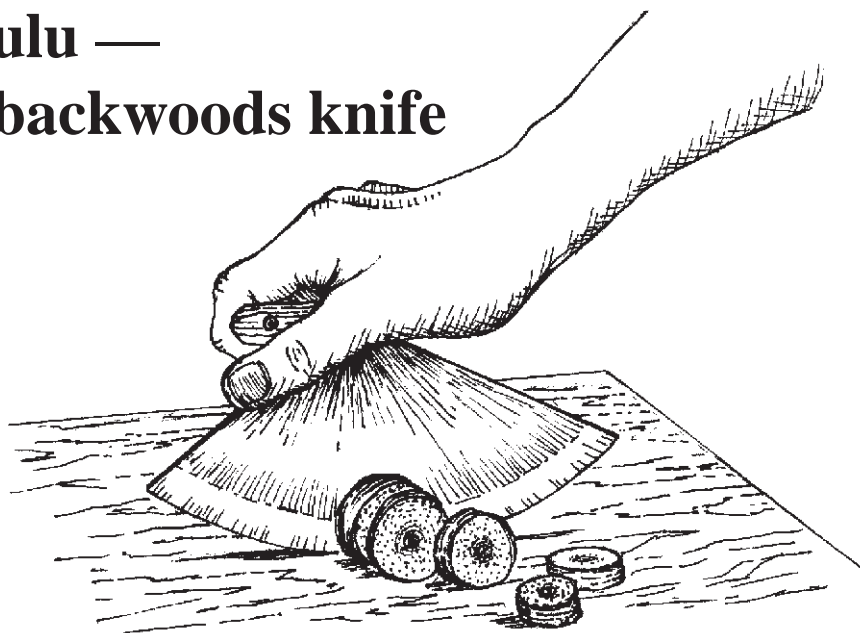
I don't know how many readers may have had the opportunity to see one of these rounded Eskimo cutting tools in use. It doesn't matter whether you need to skin a caribou or just cut up some vegetables—once you've used one of these ingenious Inuit knives, you'll never be satisfied with regular cutlery again.

The way I understand it, all of the original "artifact" type ulus were fashioned from slate, bone, or shell. None of these materials is especially difficult to work with, so of course I've attempted making and using ulus from all three. While the resulting tools were better than no knife at all, I was not at all pleased with their performance. These soft materials require such frequent resharpenering that every task took much longer than necessary.

I also have an ulu that a friend masterfully knapped from black obsidian. This tool holds a sharper edge than any surgeon's scalpel, through hours of heavy cutting. However, this volcanic glass is just as brittle as the man-made variety, and the ulu itself looks almost like a work of art to me, so I very rarely use it at all.

However, once the Inuit were able to obtain quality steel from the white folks, they really had something terrific. Now that I've tried using this sort of knife, the ulu has become the tool I normally use for any cutting task. Whether I'm skinning the fall's buck, butchering a hog, filleting a freshly caught large-mouth, or just cutting a piece of string, I usually reach for one of the ulus I've made from steel. I just haven't found any other style of knife as well suited to cutting as this one.

In my experience, the best steels to use in fashioning one of these superb



knives are (from best to good): a piece from one of those old one-man cross-cut log saws (the steel is thicker than the metal from the two-man type, but don't cut up a good saw, find a junk one); a ruined circular saw blade; a section from a two-man log saw; or a piece from a regular hand saw.

### Different methods

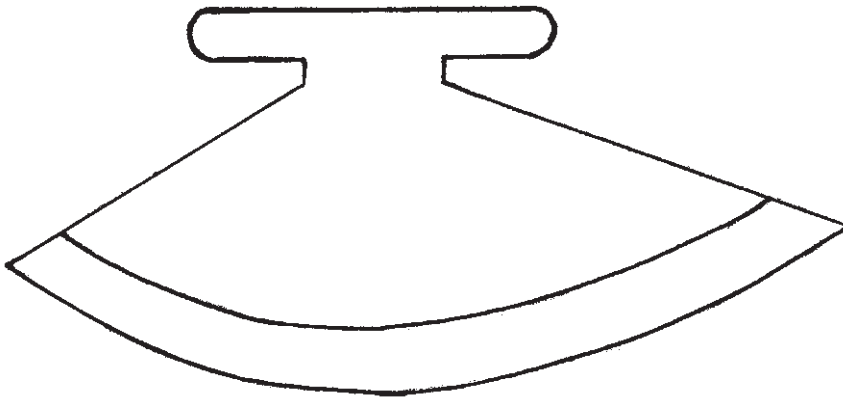
Most of the ulus, as well as most of the other knives and tools that I've fashioned over the years, I've cut out with a regular cutting torch (sometimes I've even used an electric "Plasma Cutter"). Then I use an electric bench grinder for smoothing things up, beveling the edge, etc. Should you have any similar equipment available, it will make your work go much more quickly.

However, you can definitely produce just as good a finished product with much simpler equipment (the Eskimo do, after all). I was thinking about writing this article before I started to make two ulu knives that I'll be giving as presents—so I tried a couple of different manufacturing methods, to be certain that any reader wishing to produce a similar tool for himself could do so with very minimal equipment.

For the first of these knives, I traced the outline onto what's left of a cross-cut saw that I've been using for similar projects. Then I used a metal cutting blade in my saber saw to cut out the shape. This was considerably slower than using the cutting torch, but it partially made up for this by leaving such a nice smoothly-cut edge. I then used my belt sander to round over the edges and bevel the blade. That worked as well, and almost as quickly, as using the bench grinder. After polishing the blade, and adding a handle of cherry wood, I was entirely satisfied with the results.

I cut the second ulu from a junk table saw blade, using a hammer and a cold chisel. This method was actually somewhat faster than using the saber saw, but the edges were a little rougher and required more smoothing up. After using a mill file to smooth over the rough edges and bevel the blade, I decided to pock-mark the surfaces using a ball peen hammer, rather than polishing it up. I liked the resultant rougher sort of hand-forged look pretty well, too. A couple of small scraps of black walnut for a handle made this into another nice looking gift.





*Cutting pattern*

## Cutting styles

With its curved blade and off-center hand grip, the ulu is used with a sort of a sweeping, drawing motion in skinning. If you've ever used a regular strongly-curved skinning knife, you'll quickly get the hang of this, and see the ulu's superiority right away. To slice up meat, cut leather, rope, etc., I use a rolling/slicing type of action. When chopping up vegetables, mincing meat, and other similar work, the blade is simply rocked back and forth on the cutting board. The cooks in your house will really love this once they've tried it. With the blade kept seriously sharpened, as all cutting tools should be, these tasks seem to proceed almost effortlessly when using this unique style of knife.

Also, since the blade is beveled on only one side, like a wood-chisel or the iron of a plane, the ulu makes a very useful woodworking tool as well. While it won't replace a regular small-bladed whittling knife, it will admirably handle rough shaping, trimming, heavy carving, rough to ultra-fine scraping, and many other related tasks. A few sharp raps from a stout hardwood stick will let you use the ulu to chop through bone like a meat cleaver or hatchet. And you can use it as a sort of combination chisel and curved adze.

Another major advantage of the ulu is something you'd expect, given its origin in the frozen North: once you've become familiar with it, you'll find the ulu is much easier to use with cold-stiffened fingers, or while wearing gloves or mittens, than any ordinary knife. I've also found this type of knife much easier to control with hands slick from butchering, cleaning fish, and such.

## Making your own

The cutting pattern shows the proportions I've found to be ideal for fashioning an ulu. You can make yours larger or smaller by enlarging or reducing this pattern. Use a photocopy, or draw a grid of squares on this pattern and transfer it to a grid of larger squares.

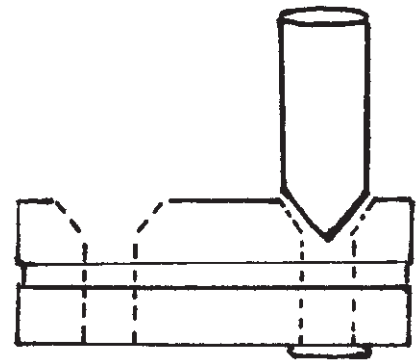
I have yet to encounter an ulu with a blade length of less than four inches or longer than twelve inches. A six- to eight-inch overall blade length has proven ideal for any use that I've found (or seen) for one of these unique knives.

I've seen many different methods used for attaching the handles to these knives, including nuts and bolts, glue (epoxy works best), wooden dowels with tiny wedges, and many more.

You might want to try my own favorite method for holding every-

thing together. I just use a pair of any sort of straight-walled, rimmed cartridge cases; .357, .44, .45 L.C., .45-70, etc. Tape the sides of the handle in place, so they won't move around, and drill appropriately sized holes through the whole thing. Deeply countersink the holes at one end. Insert the empty cartridges, then use a tapered punch to spread open the cartridge mouths, sort of rivet fashion. Any projecting brass can be easily filed and sanded to bring it down to the handle's surface. This method works really well for me, and it adds a nice outdoorsy sort of look to an already distinctive tool.

I'm not going to bore you with instructions for fashioning a sheath for your new ulu knife. It's not difficult to make one out of leather. However, I would suggest fashioning a wooden



*Drill wood and metal of handle.  
Countersink. Insert cartridge.  
Use tapered punch to spread.*

knife holder of some sort, if your ulu is intended mostly for kitchen use. This will protect both the people and the cutting edge of the knife.

If you choose to make yourself one of these exceptional Eskimo ulu knives, I'm sure you'll be pleased with the results. By the way, you might want to be a little careful about showing off your handiwork. I took more care in finishing the ulus I built for presents than I did with the ones for my own use. Now, after seeing these, my wife has requested a matched set of a dozen, for steak knives. Δ

## Build an inexpensive but durable jackleg fence

*By Dynah Geissal*

When we moved to our land in the summer of 1994, we were fortunate that open grazing exists where we live because we had to build shelters for the animals and a house for ourselves before winter. We had only four and half months and so there was clearly no time for fencing.

However, cattle on neighboring range land had grazed everything in sight. Grazing land was leased from the timber company as well as from other private parties, but all the cattle congregated in a meadow. After all, why would they want to be in the forest? Consequently I had to begin feeding hay to our animals a month early because there was literally nothing left. Besides that, the seedling trees were topped, the stream banks eroded, and the native plants so overgrazed that exotics were taking over and no livestock would eat the stuff—not even my goats. Even the beargrass, which really is a lily of no nutritional value, was eaten to the quick.

In addition, our neighbors a mile and a half up the road were concerned that my horses would visit theirs, causing their stallion to perhaps injure himself in the fence. I promised them that I would fence right away in the spring.

We began May 1, the earliest possible time, and finished the lower 15 acres by the middle of June. Our fence is called a jackleg and costs nothing other than the nails and the fuel for the chainsaw. It is extremely labor-intensive, however, and we found that we could work on it for only five hours a day without getting grouchy and irritable. That left the rest of the day for the usual farm chores.

We have no access by vehicle so we carried and dragged our materials wherever we needed them. That was relatively easy when we were working in the woods, but much of our lower 15 is meadow where there are no trees at all. Sometimes we spent the entire day just hauling poles and posts. Still it was very rewarding and the fence is beautiful. It is meant to keep our large



*A jackleg fence made from dead lodgepole pines.*

livestock (horses, cattle) in and the range cattle out.

Our goats are free to come and go with the blessing of our only adjoining neighbor, Sarah. Our other boundaries are adjacent to U.S. Forest Service and timber company land so there is no problem there with letting the goats range free. If they had to be restricted, field fence could be attached to the jackleg, but it would be quite expensive.

A jackleg fence consists of rails which are supported by two uprights that are joined together at an angle to form a long legged X. We used dead lodgepole pine for our fence. If we were working in an area that needed thinning we would use live poles, but they are extremely heavy to work with. Branches on live trees would have to be removed with an ax to avoid unnecessary use of the chainsaw.

For our uprights we used 6-inch posts at the ends of each section of fence and 4-inch-diameter post for the middle supports. The posts are 5 feet long and when the weight was not too great we left them in 10-foot lengths to carry them to the site.

We laid the posts and poles just outside the fence line and sometimes cut as many as 30 posts at a time. Then one person would cut the notches a foot and a half from the top of each post and to a size that would fit the corresponding post that would be joined to it. The other person used a hammer to remove the diagonally cut kerfs. Then the posts were spiked together using 50 penny nails.

Traditionally the rails were 10 feet long, but in the very old days they were 11 feet long. There were six of these 11-foot rails to a chain which was the standard measurement at the time. The “fence viewer” would merely count the rails to determine the acreage a person had. We began our fence with three rails of 10 feet each.

As we began carrying our rails farther and farther from the forest, we began experimenting with longer lengths. After all, it would mean fewer uprights, fewer spikes and fewer cuts. Also it wasn't much harder to carry a 15-foot pole than a 10-foot one. (The

forest service uses 16-foot rails because they are the longest that are manageable for a single person to use in fence building.)

After a while we were using 25-foot rails with an upright support in the middle. I found that to be the maximum size for my strength if I intended to keep working all day. The actual construction went very fast when there were only four sections for every 100 feet.

When our materials had been laid in place after sighting the boundary line with a compass, we began to erect the fence. One person held a pair of spiked together uprights while the other person placed a rail on top and sighted down it to the boundary marker or the preceding section of fence. Then it was spiked into the upright with a 30 penny nail. Next the other two rails were spiked in place.

Whether you put the rails on the inside or the outside of the fence is determined by whether you are primarily trying to keep something in or out. We put the rails on the outside because keeping out 200 cow/calf



*Swinging gate attached to an upright log on the right side of the photograph*

range pairs was way more important than keeping in our small herd. We also added diagonals every so often to give the fence added strength.

When we finished fencing the 15 acres containing the meadow, we decided to fence in about an acre around the house. We were getting really tired of having our livestock hanging around the living area. For this fence we used four rails which has proved adequate to discourage the goats for the most part.

We used different sorts of gates for different purposes. Across the driveway entrance we have three poles that slide along the fence rails to open and close. It's easy to use and keeps the goats out. Eventually this will be replaced with a swinging gate, but that requires a deeply-dug hole.

We have three swinging gates, one each on the north, east and south fences of the yard. These are walk-throughs so they don't require any support other than the fence. We attached them as shown in Figure 1. Be sure to leave space below the gate for snow accumulation. We've found that 4 inches is about right. That way we can shovel fairly easily without having to dig through ice pack all the way to the ground.

One of the great advantages of the jackleg fence is that there are no holes to dig. The fence has proved very strong and has had no trouble withstanding the onslaught of the cattle. An unexpected advantage is that parts are easily replaced in the event of blowdown (and it makes for a great kitty highway). We had major wind storms last fall and the only consequence for us was maybe half a dozen poles that were crunched by trees. Our neighbor's barbed wire fence, however, was completely devastated and had to be restrung. It is also, in my mind, the most aesthetic of fences.

Next year we will fence our 25 acres of mountain. Δ



*Detail of the construction of a jackleg fence.*



## Build a homestead Copy Cart

*By Charles A. Sanders*

I don't know too many homesteaders, gardeners, or small farmers who haven't at one time or another wished for one of those fancy big-wheeled garden carts. It seems that there is always something that needs to be toted around on the place, be it hay or straw, rocks, firewood, garden tools, plants, compost, or whatever. Think about it for a bit, and the need for a hand cart on your own place will probably become evident.

Well, being the basic cheapskate that I am, when I finally decided that I was going to have one of the carts, I figured that I could save some money if I built it myself.

I have a friend who had taken the plunge and bought one of the carts from a commercial outlet, so I took the liberty of snapping a few photographs of some of the structural details which I wanted to replicate. Afterwards, a half hour or so was spent with a pencil, paper, and ruler to come up with the rest of the plans, as well as the measurements for making

the cuts for the cart body from a single sheet of 1/2-inch plywood.

So, with a good fire going in the stove in the workshop, I set about to

panels. For the metal sheathing, I again journeyed over to the Amish settlement, this time to a business specializing in post building and metal construction. There, I had the metal shop do a little custom bending on some 'seconds' and leftover pieces of heavy gauge roofing metal they had available. Soon they fashioned the



*A finished Copy Cart*

come up with my own version of the garden cart, the Copy Cart.

I purchased the wheels for the cart from Northern Hydraulics in Burnsville, MN. They have a big mail order business for all sorts of tools, parts, and equipment. (If you don't receive the almost too frequent catalogs from Northern Hydraulics, phone 1-800-533-5545 to get on their list.) I selected the 26-inch pneumatic-tired wheels for use on my cart. They are on roller bearings and made to take a 3/4-inch axle. For the axle I purchased an ordinary 3/4-inch iron rod from a buggy factory in the nearby Amish settlement.

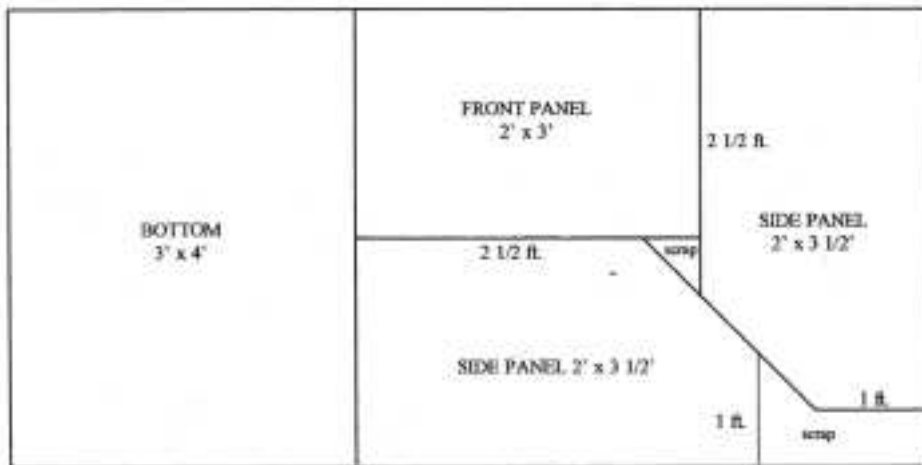
I planned to cover the edges of the plywood pieces with metal to prevent splinting and to prolong the life of the

metal into pieces of angle-stock 2 by 2 inches by 8 feet and some into U-channel 1 by 1/2 by 1 inch by 8 feet. The 2 by 2's were used on the corners for strength and durability, and the U-channel was used to cover the cut edges of the plywood. All of the metal was secured with either long shanked pop rivets or with small carriage bolts.

The axle was attached by cutting 3/4-inch holes into two pieces of an old bed rail. The heavy metal added strength to the cart bottom and the pre-cut holes where the bedsprings had once been attached provided ready-made holes for attaching the rails to the cart bottom with short 1/4-inch carriage bolts. The axle is positioned so that the leading edge of the wheel is only a couple of inches from the front edge of the cart itself. This



*Detail of angle-iron bracket*



*All the panels needed from the cart can be cut from a single 4 foot by 8 foot sheet of 1/2- inch plywood.*

provides a very good balance for hauling and is handy for tipping the cart up to load bulky articles such as barrels or large boxes.

The cart handle and stands were made from 3/4-inch electrical conduit bent with a conduit bender. I admit, it took some head scratching for me to figure out how to make two pieces with the conduit bender which needed to be nearly identical. But with some measuring, checking, eyeballing, remeasuring, and rechecking, the



*Detail showing tool loops and metal edging attached by pop-rivets*

stands, as well as the cross-brace, came out really well.

I wanted to duplicate the general style of the opening system on the my friend's cart, but lacked the hardware which is used in the store-bought version. So, to the junk boxes I went. I came up with two ordinary door slip-bolts. As you can see from the photograph, I attached one to each side of the end gate near the top. When each bolt is set to protrude, they are situated in reinforced holes near the top front corner of the side panels. I drilled a small hole near the end of each bolt and used a small clip pin to hold them secure. This prevents the side panels from splaying outward, and allows the end gate to swing from the top, enabling compost, dirt, or whatever to be dumped out the front, similar to the way a dump truck works. If I want the end gate secured at the bottom, two more of the slip-bolts will hold it in place. As soon as I scrounge up a couple, I'll add them.

Another addition to the cart are the tool loops. I added these to the outside of the cart for carrying pruners, trowels, and other hand tools. It keeps them visible and in one spot until needed. Some scrap of nylon webbing was secured to one of the side panels using small bolts. Washers keep the

webbing from pulling off of the bolt heads. A piece of an old leather belt should work just as well.

Most of the bolts, screws, and assorted small hardware were scrounged from my own collection or from my Dad's gigantic accumulated hardware collection. I had some red paint left from repainting my barn, so the cart was given a good coat of the preservative. By buying new plywood, wheels, and conduit, as well as the axle, sheet metal and long-shanked pop rivets, I ran the cost of my cart up to around \$80. Still, that amount is considerably less than a new commercial version of a similar cart. This custom version is also about 6 inches wider than the commercial model and has side panels about 6 to 8 inches taller as well. For those, I just used what I had. The diagram, however, shows how every piece of wood needed for the cart can be cut from one 4 by 8-foot sheet of plywood.



*Closeup of the sliding doorbolt with a clip used to secure the front end gate to the cart panel*

Our homemade Copy Cart has proven to be one of the handiest and most useful tools that I have on the place. In fact, we were using it to haul bales of straw in before it was completely finished. Since its completion, I've hauled concrete blocks, some split firewood, old bedding from the chicken house, and some hay bales. Of course, the kids had to have a ride in it as well. Δ

## These double-steep half stairs save space

By George W. McLeod

If you need a staircase that occupies minimum space in a small residence or cabin, consider this type that utilizes alternate, overlapping half-treads. The design requires that one adjust to moving down rather than forward when descending. The middle-height handrail is useful when ascending and is needed for smaller children. The plywood panel covering the underside of the staircase is essential to prevent stepping through when descending.

The staircase is sloped at 60 degrees to the horizontal. For those not famil-

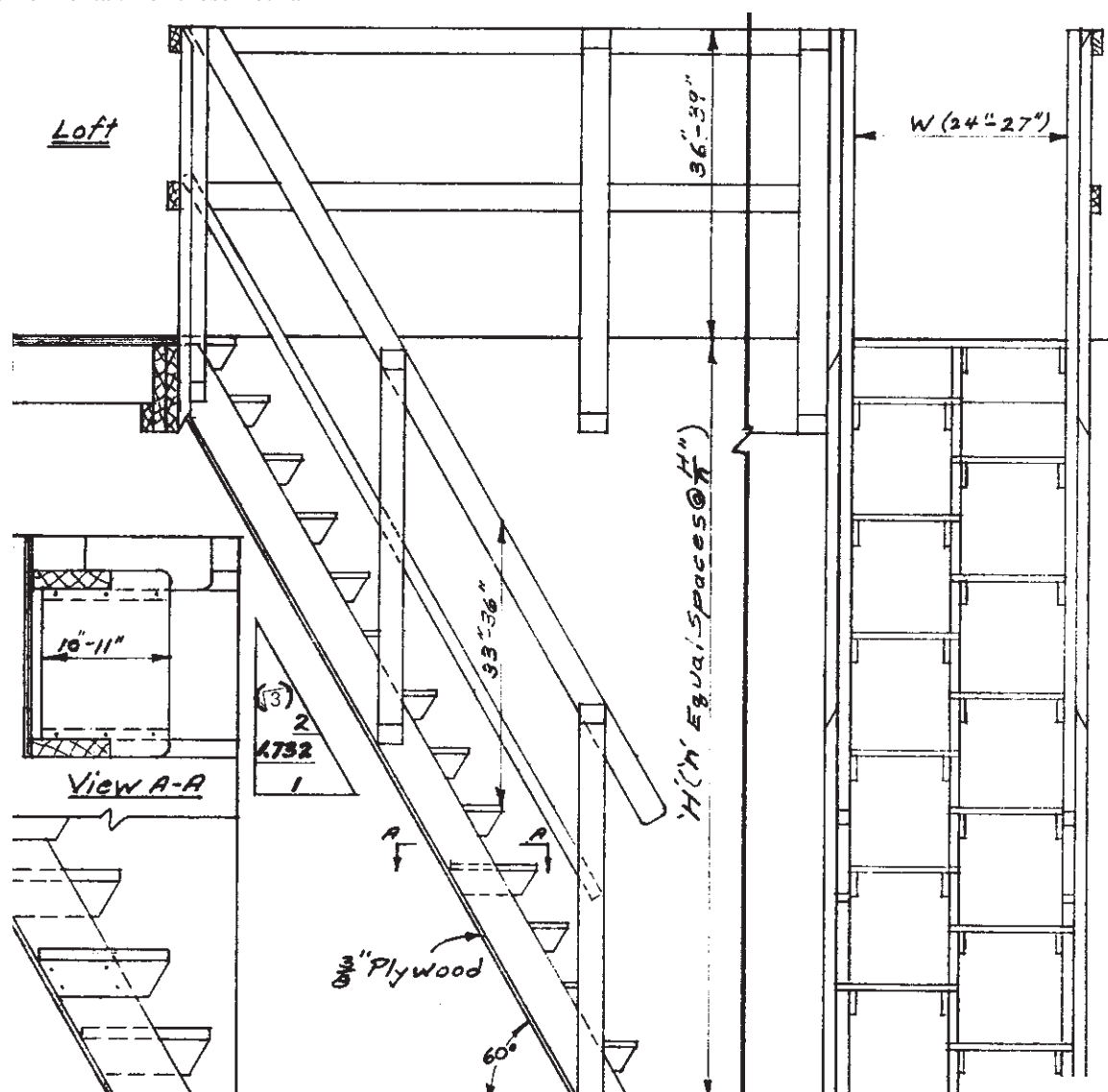
iar with trigonometry, the 30/60/90 degree triangle relationships of 1:2:1.732 are useful in calculations. This slope also provides clearance for one's knees when ascending. The rise per step should be in the range of 6.5 to 7.75 inches.

Determine the number of steps roughly by dividing the total height between floors by seven. Round the answer to the closest whole number to arrive at the number of rises. The number of standard treads will be one less. Don't forget to allow for the thickness of the top special tread when determining the length of the 2x6

stringers. I recommend drawing a full-scale side view of the upper end to get everything right.

The stairs should be assembled as a unit with nails and adhesive (without the handrails, if being transported to the site). Rounding exposed corners is desirable for safety. The narrower 24 inch width is safer for use by children; adults may want additional width.

Treads are 10 to 11 inches deep, made of  $\frac{3}{4}$  or 1 inch plywood. Tread supports are  $\frac{3}{4}$ -inch plywood, three inches deep. Stringers are three 2x6s. Handrails are 2x4s for the top rails, 2x2s for the mid-height rails.  $\Delta$



*The Eighth Year*



# Ayoob on firearms

*By Massad Ayoob*

## The M1A — a rifle that makes a statement

*By Massad Ayoob*

**I**take the Springfield Armory rifle out of the box, and savor it. I seldom do that with guns, but a Springfield Match grade M1A will make a connoisseur out of anyone who knows their rifles.

The M1A is a reincarnation of the M-14 7.62mm NATO military rifle that became this nation's standard and saw our country midway through the Vietnam conflict before it was replaced with the M-16. In the match grade, it is more accurate than many bolt action hunting rifles. They are used, sometimes with iron sights instead of telescopic sights, at 1,000 yards. That's right. One thousand yards.

The last one of these I had was the M-21 sniper version. It would put every round of Federal Match Grade 168-grain hollowpoint .308 Winchester ammunition (.308 Winchester is the civilian designation for 7.62mm NATO) into a group measuring about an inch and a half at two hundred yards. Being semiautomatic, it would fire as fast as the trigger could be pulled.

I sold that fine rifle to someone who could make more use of it. At the time, I didn't shoot rifle competition and felt no need to reach out a long distance with great precision and immediate repeatability.

Now, I find myself going to the cabin on vacations and taking with me a rifle instead of the shotgun I keep at my home in the city. In a rural situation, home defense is more likely to involve those inside having to engage those outside, often at considerable

distances. A precision-shooting .308 semiautomatic rifle is the ideal tool for that mission.

For many years now, Springfield Armory has been in the forefront of those in the industry fighting legislation that would prevent law-abiding American citizens from owning certain firearms. Since it fires only one shot at a time, the Springfield does not fit a semantically correct definition of an "assault rifle." Its rugged construction and inherent accuracy makes it suitable for hunting, so long



as its 20-round magazine doesn't exceed game law limits.

In the Kalahari Desert in 1987, I took the magazine out of my other M1A and hunted with it as a single shot, with only the one cartridge in the chamber. I shot a handsome Springbok at some 350 yards. The M1A's accuracy speaks for itself.

Springfield Armory has a promotion going that they call "the loaded M1A." Through May 1 of 1997, you can buy one of these rifles through a participating dealer and save up to \$579 on accessories. Each rifle comes with a carbon steel barrel, a trigger fine-tuned to a 4 pound 12 ounce press, and a flash suppressor, all National Match grade. The flash suppressor, forbidden under the Clinton Crime Bill, is legal because it was manufactured prior to the ban. Similarly grandfathered are the three

twenty-round magazines, which can't be manufactured for civilians any more but are legal in this case because, again, they are pre-ban. I ordered mine with the stainless steel barrel option and third-generation telescopic sight mount.

What's a rifle like this doing in a rural cabin? It has the power you need for deer, moose, elk, or bear, so long as there is short enough a magazine in it to conform to the game laws. It also has the power that neutralizes vehicles with judicious shot placement.

But, you know what else? Springfield making this "best buy" available is their way of making a statement, a statement that a law-abiding citizen should be able to own any firearm he or she wants, within reason.

The M1A is definitely within reason. Owning it responsibly is silent proof that you're not the kind of whacko who climbs the Texas Tower and starts shooting at people. It's silent proof instead that you know your rights, exercise your rights, protect your rights, and don't trample the rights of others.

At a time in America when too many people try to make legislation make up for lack of human values, and too many people demonize segments of society for possessing things that the lightweights fear, I appreciate Springfield Armory making this low-cost package of a truly fine firearm available to the citizenry at remarkably low cost.

I haven't fired a shot with it yet, but my new rifle already means a lot to me. It's not just a piece of steel and walnut. It's not just a gun.

It's a statement...a statement about the values of a free and independent people. Δ

## Here are some answers to often asked questions of anti-gunners

*By Massad Ayoob*

**I**t has become increasingly politically incorrect to be a firearms owner. This is because trends tend to be set by the fashionable and the media-connected in metropolitan environments. Gun ownership per capita is well under 50% in urban areas of this country. Nationwide, it is estimated that one half of all homes contain at least one firearm. As the demographics move into rural areas, gun ownership well exceeds that 50% margin, and on the frontiers and in the true backwoods home, gun ownership will generally be found to reach the 90th percentile of the population.

When your beliefs and values are challenged, you want ready answers. The following have worked for me when debating the civil rights of gun owners in this country.

### ***Isn't the Second Amendment about the National Guard?***

Frankly, no. Serious legal scholars have almost universally agreed that the Second Amendment speaks to the rights of the citizens, not the rights of the states or other communities. Doesn't it seem incongruous that the Framers would have written one states' rights amendment into a Bill of Rights that otherwise speaks entirely to the rights of individuals?

Besides, consider that the document in question was written at a time when the gunfire of the American Revolution was still ringing in the ears of the Framers. A "national guard" of the period would have been Tories loyal to King George, hardly an entity the freedom fighters who wrote the Bill of Rights would have wanted to empower.

Historically, you'll also find that the constitutions written by the separate

colonies prior to the Declaration of Independence and the Bill of Rights spoke of firearms ownership specifically as an individual right encompassing personal protection, and not just a tool to facilitate state militias.

### ***Isn't a gun just a phallic symbol?***

If it was, no man would ever have bought one with a two inch barrel.

### ***What about the argument that people die in domestic arguments because a gun is within reach of an angry person?***

Certainly, those with uncontrollably violent tendencies should not own guns. When asked this question, I always respond with a question: "Could you pick up a gun and kill someone you love because they angered you?"

If the answer is No, I reply, "Then how dare you imply that I, and everyone else, would be that unstable?" If the answer is Yes, I suggest they stop attempting to counsel well-adjusted people and immediately seek psychiatric counseling for their own self-admitted tendency toward acting out impulses of uncontrollable violence.

### ***Won't criminals just take your self-defense gun and shoot you with it instead?***

That has happened, but rarely. It occurs more often with police, whose openly worn service handguns come quickly to the mind and the hand of the high number of criminals they face in the course of their work. If you're worried about it, take a course in handgun retention, the art and science of defeating a physical disarming attempt. Most of this training is limited to cops, but private citizens can take such classes on the East coast from Lethal Force Institute (1-800-624-9049) or on the West coast from



*Massad Ayoob*

Firearms Academy of Seattle (1-800-FAS-AMMO).

### ***How can one morally keep a lethal weapon when the Fifth Commandment states, "Thou shalt not kill?"***

That's not what it actually says. Biblical scholars seem unanimously agreed that in the original Hebrew, the commandment said, "Lo Tirtzah, Thou shalt not commit murder," i.e., thou shalt not kill with evil intent.

This is not an exclusively Judeo-Christian ethos. The Bible, the Talmud, the Koran, and the Book of Mormon all make it clear that there are times when it is both justifiable and necessary for the good to use lethal force against the evil. Provisions for justifiable homicide have existed in every body of law in the history of civilized Man: the Code of Hammurabi, the Napoleonic Code, the English common law, the Dutch-Roman model. From communist nations to capitalist, from the First World to the Third, it has been universally understood that every human being has the right to use lethal force against any individual who unlawfully threatens their life or limb with killing or crippling intent.

***Don't all the police favor gun control?***

No. A number of high profile police chiefs have espoused gun banning schemes, but they're usually mouthing the platforms of the politicians who appointed them, and in whose good graces they must stay if they don't want to be demoted back to Captain, usually the highest rank protected by civil service laws. In rural areas, polls show, most police chiefs and sheriffs

support citizens' rights to be armed against violent criminals. Polls of working street cops routinely show the overwhelming majority favor the rights of the citizens to keep and bear arms. Indeed, most cops make sure there's a gun at home with their significant other for family protection while they're at work.

There isn't space here to go into all the specious arguments used by those who would take from you your right to own firearms if you choose. If you

find yourself debating the issue, many publications of the Second Amendment Foundation will give you ample ammunition. You can call them for information on literature and membership at (206) 454 7012, or write SAF, 12500 N.E. Tenth Place, Bellevue, WA 98005. Δ

(Massad Ayoob teaches armed self defense classes around the country to both police officers and civilians. For information, write to LFI, PO Box 122, Concord, NH 03302, or call toll free 1-800-624-9049.)

# 10 strong mildew deterrents

*By Sandy Lindsey*

**H**ere are 10 handy hints that you will find useful for controlling mildew:

**1.** Mildew in a storage closet? Place a bowl of vinegar in the middle of the room to absorb dank odors. But don't forget that the bowl is there. If you accidentally knock it over, you will find yourself with a strong vinegar odor that is almost as offensive as the mustiness was.

**2.** Another alternative to combat cabin mildew is to leave a bare light bulb on. The dry heat from the bulb will combat mildew. To make the process work even better, leave a small fan on to circulate the air.

**3.** To remove mildew stains from cabin carpeting, spray on a glass cleaner, let sit for five minutes, then scrub. Repeat if necessary. Glass cleaners work better than conventional detergents because they don't contain soap and therefore don't leave a residue to attract further dirt.

**4.** To deodorize mildewed carpeting, first clean as recommended above and allow to dry thoroughly, then sprinkle on 20 Mule Team Borax generously. Let it sit undisturbed for an hour before vacuuming up unpleasant smells.

**5.** Oven cleaner is the answer to a fiberglass hot tub or shower stall. First, make sure you've got proper ventilation, then spray on generously. Give it five minutes to attack the grunge before wiping clean with a pad of damp

paper towels. A sponge paintbrush works great when it comes to cleaning out tight places such as shower door tracks.

**6.** If mildew has stained your fiberglass tub or shower, use a liquid detergent or a mixture of baking soda with just enough water to make it into a paste. Apply liberally, let it work for 30 minutes, then wash off.

**7.** Clean the fridge with white vinegar to remove any mildew odors. For continued deodorizing, don't rinse afterwards. For additional deodorizing, place some fresh (unused) coffee grounds in a cloth pouch and toss it on the center shelf.

**8.** If your stored clothing, sheets, towels, etc, are becoming musty, put fabric softener sheets in between them to absorb odors and leave a fresh scent.

**9.** Stored furniture should first be vacuumed thoroughly, then prop any cushions at odd angles to the furniture so that air can flow around them. Sufficient ventilation is the nemesis of mold and mildew. This is especially important if the furniture is stored in a dank basement.

**10.** To hinder the formation of mildew in a vacation home that won't be used until next season, prop all interior doors open, including bedroom doors, closets, cabinets, and the fridge door, and leave drawers slightly ajar for increased ventilation. If possible, have someone come in occasionally to run the air conditioning or heat to circulate the air. Δ



## Go camping on a low budget or go on no budget at all

By Christopher Nyerges

**Y**ou don't have to spend a fortune to go camping. As a kid, I hiked and camped with my friends in the Angeles National Forest of California for next to nothing. I still do today.

Over the years, I have gradually acquired camping gear that works for me, and that I feel is worth having. I don't mind spending extra money on an item if I know it's the best and if my life can depend on it. On the other hand, to this day I don't care much for useless gadgets that just take up space and add weight to the pack. I like to go as light as I possibly can.

So I thought that you'd enjoy hearing how we went hiking back then. Some of you will chuckle at our youthful enthusiasm and silliness. Some of you might even think we had a few good ideas.

**Clothing:** We never purchased special clothes designed for hiking or backpacking. We wore what we called our "play clothes" that we didn't worry about getting dirty or torn, but durable enough for a weekend or a week in the hills. We simply dressed for the season, and took an extra sweatshirt along if it was cold.

The one area that could have used improving was footwear. I usually had poor footwear on the trails, but I never let it bother me. The worst time was when I had some old suede shoes while hiking in the snow. My feet

were wet and cold the whole time, so I was either constantly moving or sitting by the fire all the time. Eventually, I learned that one could put a plastic bag over the socks and keep the feet sort of dry in the winter.

But since most of our hiking was in fair weather, wearing our "city shoes"



*Christopher Nyerges ties up a pair of long pants, making them into a quick and comfortable pack.*

into the hills was usually not a problem.

**Knife:** Heck, every kitchen has knife, hasn't it? We just wrapped a small kitchen knife in a piece of cardboard for safety and put it in with our gear. Eventually, we received Boy Scout knives as gifts one Christmas, and we carried them all the time.

**Mess kit:** Why would we need to go out and buy something special just for hiking and backpacking when every kitchen in the world—well, at least *our* kitchen—had dishes and silverware and pots? We'd pack an old pan and pot, and would sometimes just carry an old pie pan and an empty can.

We reasoned that with the pie pan and can, we could crush them and bury them before returning home and wouldn't need to carry them back. We'd also grab a few plastic forks and spoons, and maybe an old metal one. Nothing more was needed.

**Canteen:** Back in the mid-1960s, plastic wasn't as ubiquitous as it is today, and the plastic that was around back then was low quality. So we didn't have plastic containers to use for water. On occasions, I actually carried a glass mayonnaise jar as my canteen, and I wrapped it with cardboard so it would be protected. Eventually, I spent about \$1 and purchased a metal WWII canteen. It was a very good investment.

However, we tried to plan so many of our hikes around the known water sources that I never bothered to carry a canteen half the time.

**Stove:** Stove? We simply cooked right on the flames of our small camp fire. I've never carried a stove.

**Flashlight:** Sometimes we'd find a flashlight in a drawer at home but more often than not it simply didn't work. Perhaps the batteries were no good. So I never got addicted to needing a flashlight at night. Did you know that the average adult has the ability to see in the darkness almost as good as an owl after 30 minutes in the dark?

**Lantern:** Lantern? If we had a lantern, we'd have to buy fuel and wicks and stuff called "misc." However, on some occasions we actually carried an old soup can. We cut out both ends of the can, and put an old clothes hanger through the can for a handle. Then we cut a hole in the side of the can and inserted a candle. That was our "lantern."



*Nyerges wearing his pants pack*

Another variation of the can-lantern is to cut open an aluminum can so that, when standing upright, it appears to have two “doors.” You then hang the can by the pop-top, put a candle inside, and you have a lantern. If made properly, the wind will catch the doors and turn the candle away from the wind. I learned about this from fellow survival instructor Ron Hood.

**Walking stick:** Though we have marveled at the beautifully-carved walking sticks at backpacking stores, we never even came close to buying one. For one thing, after you spend \$40 for a beautiful stick, who wants to mess it up on the trail. Additionally, we discovered that there was never a shortage of sticks in the woods which could serve as a walking stick.

**Tent:** Tent? Those are heavy and expensive. I have never carried one. The closest I have ever come to packing a tent was when I used tube tents a few times in the early to mid-1970s. But otherwise, you can usually avoid the need for a tent if you simply pick your campsite well.

**Sleeping bag:** On many of my first backpacking trips, I never carried a sleeping bag. I slept in a hammock with a tarp. I was cold.

My first sleeping bag was loaned to me from my older brother, and it was a layered paper sleeping roll designed for just a few uses. I was cold.

I have carried just a blanket or two with me, and I have gone backpacking

with just an emergency space blanket. I was cold.

I have learned to sleep in holes, in lean-tos, and in various natural shelters with no sleeping bag and stay warm.

A sleeping bag is one item where it pays to get the best you can afford. Buy the down-filled type, and one that can be compressed into a small bag. I have purchased good quality sleeping bags for as little as \$5 (and never more than \$20) by watching the ads in the newspapers.

**Toilet paper:** Sometimes we went into the bathroom before our camping trip, grabbed a roll of toilet paper and tossed it into our pack. But often we forgot to do this, and discovered that the woods are full of “toilet paper.”

**Map and compass:** Get real. We simply went up to the mountains and followed the trails, and we often had no idea where we were going, other than some obscure rumor from someone that a friend of a friend had talked to and suggested that maybe this particular trail actually led to some really good place. It all sounds very silly and imprecise as I think back on it, but that’s how we did things.

After awhile, we got to know more and more of our local trails and we would go back to our favorite spots again and again, day or night, summer or winter. No map or compass was ever needed, and we never got lost.

**Fire starter:** We would take book matches that we got for free at the local supermarket, and stick matches from our parents kitchen, and wrap them up in several wrappings of plastic. Back then, there were no Bics, no magnesium fire starters, and none of the high-tech devices that today assure fire for even the village idiot.

**Pack:** Again, remember we had no budget. We have actually carried bags of stuff into the mountains, which made us look more like we were running away from home than campers. Eventually we purchased canvas packs at the Army surplus shop that used to be in downtown Pasadena. We spent a few dollars on what was an excellent investment. Still, those heavy old packs are dinosaurs compared to the packs of today.

On occasion, I have used potato sacks to carry things, but that is uncomfortable and doesn’t leave your



*Inexpensive trail food can be purchased at the local market. Clockwise from left are a bag of granola, macaroni, rice, avocados, oranges, garlic, carob pods, (picked from the local trees), and French bread.*





*Handmade or salvaged gear for the trail. Clockwise from left: coconut bowls, a plastic water bottle for a canteen, a can for a cooking pot, a pie pan for frying, a jar lid (in the pie pan) used for a candleholder, a wood burl burned and carved into a drinking cup, plastic fork, knives from the kitchen, chop sticks made from cattail stems, a spoon carved from a yucca stem, book matches, and some twine.*

hands free. My best “for free” pack was made by converting an old pair of pants into a pack. You simply stuff all your things into the pants. The legs will be the carrying straps. You then tie off the waist and cuffs, and tie the

cuffs up to the waist. Presto, a pack. If done right, you get a very comfortable pack that everyone laughs at.

I have even made an emergency “pack” from a long sleeve shirt, but I had to do a bit more tying to create the pack.

**Food:** Food in the backpacking shops always seems to cost too much. Freeze-dried, specially portioned exotic meals, Meals-ready-to-eat (MREs), special candy bars, juices, etc.

We would just go to the supermarket and purchase dry things like rice and buckwheat groats and spaghetti. Then we purchased dry soup mixes and instant potatoes. Then we’d get a bottle of dried spices, some nuts and seeds, fresh fruit like

apples and avocados and perhaps some cheese. After a while, you have good food at a reasonable cost.

But in the very beginning, as I said, we had no budget. We just looked through our parents’ cupboards and picked out anything that was dry and light and that we thought we might like. Doesn’t every kitchen cupboard in the world contain at least enough odds and ends to make a few decent trail meals for a week or so? Ours always did. And though some of our meals were slim, it was partly because we didn’t want to carry any more weight than was absolutely necessary. Which is why I have pursued the study of wild edible plants for most of my life—but that’s another story.

I have always believed that simple enjoyment of the outdoors should be as unadorned as possible. Part of the attraction—to me—is to be in the outdoors where you can think and be with yourself and friends. Why clutter it up with all the overpriced gimmicks and gadgets that take up weight and occupy too much of your time?

(Christopher Nyerges is the author of four books on the outdoors, including *Guide to Wild Foods*, which is available through *Backwoods Home Magazine*.) Δ



*A simple hanging lantern made from an aluminum can*

## *A country moment*



*Brenner Dawson, age 3½, feeds ducks.*



## Think of it this way...

By John Silveira

### Prohibition: then, now, and always

I heard a vehicle pull into the driveway but I was busy setting one of the articles for this issue so I didn't look through the blinds to see who it was. In the back of my mind I heard a car door slam. Moments later, I heard the front door of our office open behind me and Dave yelled, "Just the man I want to see."

"Me?"

That voice belonged to O.E. MacDougal, Dave's poker playing friend, and I spun around.

"We've been trying to reach you," Dave said. "We've gotten a bunch of letters and e-mail over the last article John wrote. Some people are accusing the two of you of endorsing drugs."

"I told you, I didn't," I said defensively. But Dave wasn't listening. His attention was on Mac.

"I didn't either," Mac smiled.

"They're saying you may as well be. I've already discussed this with John at length..."

"Got any coffee?" Mac asked.

Dave continued, "More than one writer said that just because we can't control the problem doesn't mean we should legitimize it. We should consider the children. One even made the analogy that if spousal abuse was rampant it wouldn't be right to legalize spousal abuse and just set up battered shelters."

"He...or she...is absolutely right—that wouldn't be an appropriate way to deal with spousal abuse," Mac said as he stepped into the kitchen. "But that's not even close to the same thing as legalizing drugs."

"There are a lot of people who think it is," I said. I was on Dave's side in this.

Mac put the kettle on, then rummaged around until he found the coffee cone and filters.

"Coffee beans are in the freezer," Dave said.

Mac opened the freezer door and found them.

"Any one want some?" he asked holding the bag up.

We shook our heads and he proceeded to grind enough for one cup.

"A lot of those people make sense to me," I yelled. "I've been wishing I hadn't written it."

He kind of tossed his shoulders non-committally, and he came back into the main office and sat down. "What do you guys know about Prohibition?" he asked.

I must have looked a little puzzled.

"You know, when booze was illegal in this country," he added.

"I want to talk about drugs and that article," Dave said.

"I am," Mac replied. "Prohibition isn't just one of the most interesting periods in American history; it also had a lot to do with what America is today—mostly for the worse—including the War on Drugs."

"How do you figure that?" I asked.

"Parallels between Prohibition and the War on Drugs are disturbing. In fact, it was the failure of Prohibition that took us down the road to this War on Drugs we're fighting so triumphantly today."

"Are you being sarcastic?" Dave asked.

Mac just smiled.

"Isn't Prohibition just ancient history?" I asked. "When did they pass the prohibition law, anyway?"

"There wasn't actually anything titled the Prohibition Law. What you're thinking of are the 18th



John Silveira

Amendment to the Constitution and the passage of the Volstead Act that was meant to carry out its intent."

"You mean there were two things that brought on Prohibition?" Dave asked.

Mac nodded. "On the national level, yes. There were also laws various states and localities passed to enforce it. But the real forces behind Prohibition were the 18th Amendment and the Volstead Act."

"Why did they ban booze?" I asked.

"What did the Amendment say?" Dave asked simultaneously.

Mac got up and got the Almanac from the bookshelf. He opened the book and found what he wanted quickly. "Let me answer Dave's question first," he said as he sat down again. Then he read:

#### The 18th Amendment

Section 1. After one year from the ratification of this article the manufacture, sale, or transportation of intoxicating liquors within, the importation thereof into, or the exportation thereof from

the United States and all territory subject to the jurisdiction thereof for beverage purposes is hereby prohibited.

Section 2. The Congress and the several States shall have concurrent power to enforce this article by appropriate legislation.

Section 3. This article shall be inoperative unless it shall have been ratified as an amendment to the Constitution by the legislatures of the several States, as provided in the Constitution, within seven years from the date of the submission hereof to the States by the Congress.

"After the Amendment was ratified, Congress passed the Volstead Act to enforce it in accordance with Section 2."

It was a revelation to me. "So they needed a Constitutional Amendment so they could pass the law to bring Prohibition on," I said.

"That's right," Mac responded.

"Why?" Dave asked.

"Without the Amendment it wasn't legal for the federal government to make such a law."

"Why?"

"Because it wasn't empowered. The 10th Amendment says quite clearly that the only powers the federal government has are those listed in the Constitution. And the 9th Amendment says we have rights beyond those referenced in the Constitution, and they too are inviolate."

He looked from one to the other of us, then picked up the Almanac which he still had in his lap and read:

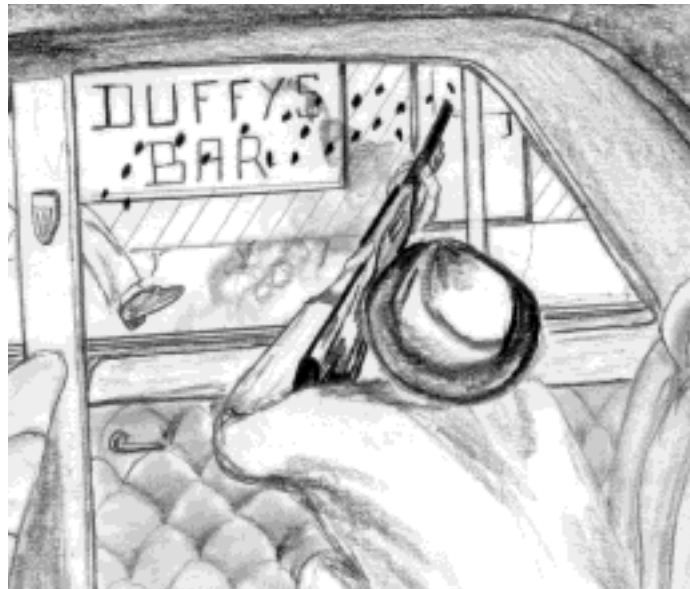
#### **The 10th Amendment**

The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the States respectively, or to the people.

He looked up briefly, then continued:

#### **The 9th Amendment**

The enumeration in the Constitution, of certain rights, shall not be construed to deny or disparage others retained by the people.



"It means that just because many of the people's rights are listed in the Constitution, it doesn't mean the government can deny us rights which the Founding Fathers had overlooked or hadn't listed."

"So, the the 18th Amendment was to give the federal government the power," Dave said.

"That's right."

"But why'd they want to ban booze?" I asked.

He looked at me, then Dave. "The answer is a rather long story."

Dave's the boss and we were on deadline, but he indicated he wanted Mac to go on anyway.

"Alcohol was probably invented by cave men and there have been calls to ban it ever since," Mac said.

"Even today?" I asked.

"Even today. There's even a political party, the Prohibition Party, whose single unifying principle is the illegalization of alcohol. The party was founded right after the Civil War and it's still around. It's this country's

third oldest political party with a continuous existence."

"What are first and second?" I asked.

He gave me an odd look. "The Democratic and Republican."

"Oh," I said. "I wasn't thinking."

"The party never grew big but, for a time, it was very influential. The election of Grover Cleveland to the Presidency in 1884 was the result of Prohibitionists voting for John St. Paul, the governor of New York, who ran on the Prohibitionist ticket. The votes St. Paul got took just enough from Cleveland's Republican rival, James Blaine, to put New York into Cleveland's camp. The state would otherwise have gone to Blaine and sealed the election for him.

"In the elections of 1888 and 1892, the party reached its high-water mark; it captured about 2% of the popular vote nationwide. But they never did that well again, though they've existed on a local and small town level ever since."

"Have other countries tried Prohibition?" Dave asked.

"They have. Various countries have experimented with it. In ancient times, the Chinese did. Various modern European countries have, and even the Aztecs attempted to outlaw drinking. Today, the ban on alcohol is still part of the religious precepts of the Moslems, the Mormons, and several fundamentalist Protestant sects."

"But what brought it on here?" I asked.

"Small-town, rural, Protestant, white America."

"Why'd they want it?"

"Originally, the United States was, for all intents and purposes, small-town, rural, Protestant, and white. But it started changing. People were leaving the farms and going to the city to find work, and at the same time, a

whole new bunch of people were coming here from Europe. They were Slavic, German, and Irish. They were Catholics and Jews. They spoke with strange accents. They drank, and they were settling in the cities.

"To many, these were signs that America was decaying and Prohibition was something that might stem the tide of decay. Get the booze out of the city and all those foreigners would start behaving. Maybe they'd even stop coming here.

## Prohibitionist science

"To bolster their argument, prohibitionists advanced the claim that institutionalized Prohibition was both scientific and social progress. Unknown 'scientists' who espoused temperance were catapulted to the forefront, and many of these men and women made their fortunes providing scientific 'evidence' for the temperance cause. It's analogous to the experts created by creationists, environmentalists, feminists, and almost any other political spectrum around today that you can mention.

"Many of the dries—and that's what they called themselves, the dries—believed that an America without booze would become such a powerful force that other countries, both in Europe and beyond, would have to invoke prohibition laws or fail to compete with us economically. They didn't just want booze outlawed in this country; they wanted to wipe it out everywhere.

"These people became crusaders because they believed they had 'right' on their side."

"So when Prohibition came about, did it just happen suddenly?" I asked.

"No. Long before the 18th Amendment passed, many states had experimented with it, and all were failures."

"Which states?" Dave asked.

"The first state to go dry was Maine, in 1851. This was the result of the efforts of a reformer named Neal

Dow. Dow then led attempts to secure such laws in other states, and 12 more followed suit. But it was always a battle to keep the laws enforced or even on the books. When the Civil War started in 1861, Prohibition didn't seem so important and by the time the war was over 10 of those states had given it up.

"But this didn't stop the Prohibitionists. They formed their political party in 1869 and began running presidential candidates. Among them was Neal Dow.

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*...the science that backed the 'drys' became part of the (school) curricula while the science that questioned or refuted dry claims was suppressed—just as it is today with environmentalism.*

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"About the same time, the Woman's Christian Temperance Union was founded. But in 1895 the most politically potent of the Prohibition groups was founded—the Anti-Saloon League.

"The League began endorsing candidates for political office on both the local and national level. It didn't matter whether you were Republican or Democrat; if you endorsed Prohibition, the party endorsed you. And those who didn't mouth the League's line found their opponents endorsed by one of the largest political blocs in the country. It became a political handicap to oppose the dries.

## Controlling education

"In the meantime, children were bombarded with temperance virtues and warnings. This went on for decades, from the end of the Civil War to the end of World War I."

"We wouldn't let that happen in the schools today," I said.

"Well, for better or worse, it's the same way children today are bombarded with environmental virtues and warnings, as well as drug warnings," he said. "In fact, the science that

backed the 'drys' became part of the schools' curricula while the science that questioned or refuted dry claims was suppressed—just as it is today with environmentalism."

"How far did they get?" Dave asked.

"Textbooks were rewritten under the supervision of temperance believers, just as today environmental groups have an input into modern textbooks."

Dave nodded. "It must have paid off for them."

"It did. And after decades of struggling to get a prohibition amendment to the Constitution, the first serious vote came before the Congress in 1914. The vote was 197 to 190 for an amendment. It wasn't enough because a two-thirds majority is needed to send an Amendment to the states for ratification. But it was a milestone because more than half of the House had voted for it.

"So, in 1917 the dries tried again, and on December 22, 1917, Congress passed the bill and it was submitted to the states. A little more than a year later, in January of 1919, the 36th state ratified it, making it the 18th Amendment. The Volstead Act, passed immediately after that by Congress, went into effect January 16, 1920."

"Once most members of the Congress were nondrinkers, I guess it was pretty easy from there," I said.

Mac laughed. "Many congressmen who voted for it were drinkers. It's just that by this time it was political suicide not to side with the Prohibitionists. In fact, all through Prohibition, while citizens were arrested on the street for violating the law of the land, many congressmen drank, and liquor was frequently served in the White House.

"This, when there wasn't a legal ounce of booze in the country," I said.

"And that's not true either. There were tons of legal booze."

"What?" Dave and I asked simultaneously.

"But you said it was outlawed," Dave said.



"Another of the ironies of Prohibition was that the groups most responsible for the passage of the 18th Amendment, and the subsequent Volstead Act, were the clergy, farmers, and the medical community. After the passage of the 18th and the Volstead Act, those same groups were the only ones who could still legally make and use booze."

"Oh, come on," Dave said.

"I'm not kidding. The clergy was still allowed to use alcohol in services, farmers were still allowed to make hard cider, and the medical profession still sold all kinds of liquors—for so-called medicinal reasons only. But as a consequence, of course, the number of prescriptions for alcohol-based medicines skyrocketed.

"Not only that, even after they had made Prohibition the law of the land, many so-called dry politicians made no bones about drinking in their personal lives. During the Democratic National Convention of 1920, a good many of the dry delegates were drunk on the convention floor.

"One of the reasons Warren G. Harding was the Republican nominee was because he had the support of the Anti-Saloon League—but Harding himself was a borderline drunk. The Anti-Saloon League knew this but kept it from the public."

"This is getting unbelievable," I said.

"Why? We've been hearing family value stories from congressmen and Presidents who have been notorious philanderers for years."

"Or like today, when we have enforcement of drugs on the street while there are allegations of drug use in the White House," Dave said.

"Well, I don't know whether those allegations are true or not, but it would be a case of history repeating itself if they are," Mac said.

"By the way, why was it called the Volstead Act?" Dave asked.

"Volstead was the name of the guy who sponsored the bill in Congress.

But the man who actually wrote it was Wayne B. Wheeler."

"Who was he?" Dave asked.

"Wheeler was the general counsel of the Anti-Saloon League. He'd joined the League right out of law school in the 1890s and spent the rest of his life with it. It was under his aegis that it became one of the most powerful lobbies ever seen in this country, and he one of the most powerful nonpoliticians this country's ever seen."

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*...all through Prohibition, while citizens were arrested on the street for violating the law of the land, many congressmen drank, and liquor was frequently served in the White House.*

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"I never heard of him," I said.

"I'm not surprised," Mac said. "For all the power he once wielded—he made and broke politicians and had more to do with the cultural changes that took place in this country, at that time, than any other single man—I'll bet not one person in a thousand, today, could tell you who he was."

"What else can you tell us about him?" Dave asked.

"Nothing. All I know about him is what he did as a Prohibitionist."

Dave and I laughed abruptly. "I thought you knew everything," Dave said.

Mac smiled. "Well, at least I knew who he was."

## **Prohibition & corruption**

"You said other countries tried Prohibition at other times. But was this the only country trying Prohibition at that time?" Dave asked.

"No. Prohibition was sweeping through the Protestant countries of Europe and North America."

"Finland tried it in 1919 and it resulted in organized crime and smuggling, so the law, seen as unworkable, was repealed by referendum in 1932. Sweden tried it and it failed. In fact, almost all the Protestant European

countries went through the phase of trying it, then giving it up."

"So it doesn't work anywhere," Dave said.

"Except in Moslem countries that have centuries long traditions of Prohibition," he said.

"So, it was illegal to drink in this country," I said.

Mac took a deep breath. "The 18th Amendment made it illegal to manufacture, sell, or transport alcoholic beverages, but, in yet another ironic twist, it didn't make them illegal to buy and it didn't make it illegal to get drunk.

"To compound the problem, many state and local law enforcement agencies refused to enforce Prohibition laws. This was especially true in the large cities where there was little sympathy for the laws. As a result, people started breaking the law immediately. At first, the booze they drank was smuggled into the country, but soon the bootleggers found it easier to manufacture booze here and bribe local officials to look the other way."

"They paid off officials?" I asked.

"Sure. Illegal alcohol generated incredible amounts of money. With it, the gangsters bought the best and fastest cars, and they armed themselves with Thompson machine guns..."

"To fight off the law?" I asked.

"To fight each other. They usually used the guns only on each other as they fought for turf. They didn't have to fight the cops. The cops were usually for sale. And if a given cop wasn't, his superiors were, or the politicians were and the cop was off the case.

"Prohibition not only made criminals rich, it made it possible for them to corrupt the police, politicians, and the courts. And, given the climate where most people didn't believe the law was a good law, bribes were easily given and graciously accepted."

"Was corruption really that widespread?" Dave asked.

"In 1920, the agents who were supposed to enforce the Prohibition were

typically paid about \$40 a week, and most of them were political appointees, not men who aspired to a life in law enforcement. They weren't stupid men and it wasn't long before they saw how much the bootleggers were making. Soon, untold numbers of these agents were on the payrolls of the bootleggers.

"In New York City, where there were 64 agents enforcing the Volstead Act for the feds, two agents accounted for over 90 percent of the arrests while the other 62 looked the other way. And there were so many complaints about the two honest ones that after a few years, they were fired—laid off, according to the government official who did it."

"That's incredible," I said.

"There was so much graft, the Prohibition Bureau became the most hated agency of the Federal Government."

"The booze must have really been flowing," I said.

"Sure. It was easy to get. There were tens of thousands of illegal stills and breweries right here in the United States.

"A second source was to bring it in across the borders. Most of the rest of the world had not gone dry and it became very profitable to smuggle part of this foreign production to the U.S.

"In fact, one of the primary reasons Canada, which had also gone dry, repealed its law, was to sell their production to anyone willing to transport it into the United States.

"Booze also came from Europe, the Caribbean, and South America. Many smugglers got small fast boats so they could outrun the Coast Guard. But fishing schooners, yachts, and even seaplanes were pressed into service to bring liquor in. Even though they brought in every kind of liquor imaginable, the smugglers soon acquired the name 'rumrunners.'

"A third way to get booze was to steal legally made booze in this country."

"The stuff produced for medicinal purposes?" I asked.

"That and what was made for export, because even though the 18th Amendment said it was illegal to export alcohol, the government still issued licenses for the export trade.

"But often, shipments of alcohol for both of these purposes were conveniently stolen, often by the manufacturers themselves so they could sell it on what amounted to a black market."

"Wow," I said.

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*During the Democratic National Convention of 1920, a good many of the dry delegates were drunk on the convention floor.*

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"The fourth source of booze was the people who started making their own wine and beer at home. It was a funny situation. It was illegal to buy, sell, or transport alcohol—but anyone could buy the equipment to make beer and wine. And many did."

"So the law was essentially ignored," Dave said.

"It depended. You could still get in trouble, especially if you didn't have the money to pay off the officials, or if someone with more money than you had paid a bribe to put you out of business because you were cutting in on their business.

"But people were still getting arrested, tried, and convicted for something which just a few years before hadn't been a crime.

"In fact, four years after Prohibition began, the federal prison population of the U.S. doubled, and it was almost entirely the result of violations of the Volstead Act, and more often than not it was the little guy who was jailed. In contemporary times, the prison population in this country has more than tripled since 1980—when we decided to get really tough on drugs. And I think I told you guys before, this country has a higher percentage of its people in prison than any other in the world—bar none. And just like with Prohibition, no matter how many peo-

ple we put in jail, the problem doesn't abate; it just gets worse as drug trafficking becomes more lucrative.

"There must have been some benefits to Prohibition?" I said.

"It's been said that during its first few years, the incidence of alcoholism fell, then it skyrocketed. But there is every reason to believe it didn't fall at all, that doctors actually failed to report many cases of alcoholism to protect their patients. Let's face it, unless you were a member of the clergy, a farmer, or a doctor, the only way to be an alcoholic was to be breaking the law, somehow."

## Prohibition's end nears

"What brought Prohibition down?" I asked.

"It wasn't the politicians—those good folks who had made it the law of the land—because they were still afraid of the dries who were still well-organized and very powerful. Besides, there were other special interests other than the dries that wanted the law to stay on the books. So, to get rid of the law, the people had to do it themselves."

"What special interests?" Dave asked.

"Besides the dries, they were organized crime, the police, the medical community, and those who were living off the graft."

"Why?" I asked.

"Well, it's obvious why the dries didn't want the law lifted. And they had already changed their stand from an economic and scientific issue to a moral one, and they refused to believe that so many Americans—the majority of adults—were flouting the law, just as nowadays we don't want to admit that drugs aren't just used by derelicts and gangsters but by college students, housewives, movie stars and even the politicians who mouth their opposition to them. To admit these things is to admit the laws are doomed to failure."

"In fact, another irony is that, unlike today when anti-drug people call out for more cops and more prisons, the dries stood in the way of appropriations for more funds to enforce the law and for the building of jails."

"Why?" I asked.

"To vote for the appropriations was to admit the law was being violated wholesale, and it meant it was doomed to failure."

"But what about the others you said didn't want Prohibition ended?" Dave asked.

"The gangsters for one didn't want it ended because they were making a great living off of it.

"The police didn't want it ended because they realized their budgets and manpower would shrink.

"The medical community was making money writing prescriptions.

"And as for those who were getting paid-off—politicians, police, and judges—they just didn't want the graft to stop."

"What was going on in Washington all this time?" Dave asked.

"Despite the evidence, those in Washington thought there was a way to make it work. When Herbert Hoover was elected President, he was a dry and he wanted more stringent regulations and enforcement to help Prohibition to succeed. At the beginning of his term, he pushed for the building of more prisons and funds for enforcement, though, as I said, the dries opposed it.

"He also initiated a study under an attorney named George Wickersham. The Wickersham Commission was intended to provide advice on how to make Prohibition succeed. But what they came back with shocked Hoover. The commission's advice was to repeal Prohibition. It wasn't working and would never work barring regulation and enforcement that would be unacceptable within a free and democratic country.

But politics being what it is, the summary report released to the country said just the opposite. Then the

whole report was released with its contradictory summary. Needless to say, it caused confusion."

"Then how did the people stop it?" I asked.

"The death knell for Prohibition was sounded when government at all levels was finding it harder and harder to get convictions for violations to the Amendment and its attendant regulations."

"Why was that?"

"Something we've talked about before—jury nullification."

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***(Prohibition)...wasn't working and would never work barring regulation and enforcement that would be unacceptable within a free and democratic country.***

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"You mean where jurors acquit somebody of a crime when they feel the law is bad, even when it's clear that the person broke the law?"

"That's it. Everyone knew Prohibition was the law of the land, but the overwhelming majority felt the law was wrong so prosecutors found it more and more difficult to get convictions for breaking the law, even when the defendants were clearly in violation.

"The courts, in the meantime, were overwhelmed with prohibition violations. More than two-thirds of the violators were allowed to plea bargain to lesser offenses.

"In some places, like Philadelphia, for every hundred people arrested, three or fewer were convicted.

"What the people saw was that these weren't mobsters getting caught, it was working men, college kids, business managers—the backbone of America."

"Everyone saw the law was a failure even while there were still efforts made to save it."

"This is sounding more and more like modern drug enforcement every minute," Dave said.

Mac laughed.

## Civil forfeiture

"Do you think drug laws are doomed to failure?" I asked.

"I guess I'm editorializing when I say this, but they've already failed, and I don't know how far we're going to have to go before we realize it. We may have to go all the way to a police state—something America was unwilling to do in the 1920s and 30s."

"But there's no evidence that we're turning into a police state," I said. "At least not yet."

"No? Civil forfeitures in this country, now being exercised at the rate of about 5,000 times a day, conveniently sidestep the restrictions placed upon the government by the Bill of Rights. Government at all levels has found it convenient to punish anybody it wants without the messy requirement of pressing charges, offering writs, or having a trial—all in the name of the War on Drugs.

"If you don't believe me, go to any large airport, buy a ticket with cash, and wave a wad of bills around. The money will be confiscated, but you will not be accused, charged, or tried, and the employee notifying security will get a kickback."

"I don't believe it," I said.

"I wouldn't either, except it happens more and more every day."

"What excuse does the government give for something like this?"

"The premise is that you don't need to carry large amounts of cash—unless you're a drug dealer."

Dave and I were quiet for several seconds. "I'm going to have to look that up," I said. "I still don't believe it."

"Go ahead."

## Prohibition ends

"So, how did they finally repeal Prohibition?" Dave asked.

"The stranglehold the dries had on politics was finally breaking. Even the politicians were coming around. It's amazing how courageous they can



become endorsing a popular stand. But there was still an obstacle. Though the majority wanted it repealed, when Constitutional Amendments are submitted to the states, they go to the state legislatures."

"Why's that important?" Dave asked.

"By this time, there were more people living in the cities than in the country—but state legislatures didn't reflect this. The majority of representatives in many states represented the rural areas—even when the majority of the citizens were living in the cities. The rural areas were holding onto Prohibition even while the cities were crying for its repeal. So to circumvent the minority, it was decided that the 21st Amendment, which would repeal the 18th Amendment, which would nullify the Volstead Act by making it unconstitutional, would be decided by elected conventions in each of the states instead of the state legislatures. This ensured that the majority would be heard.

"Then, one by one, the states ratified the 21st Amendment. The 36th state to ratify it, and therefore secure its passage, was Utah, the Mormon stronghold and the state with the smallest percentage of drinkers.

"Did the 21st Amendment just say the 18th was null and void?" Dave asked.

Mac picked up the World Almanac again and read:

#### **21st Amendment**

Section 1. The eighteenth article of amendment to the Constitution of the United States is hereby repealed.

Section 2. The transportation or importation into any State, Territory, or Possession of the United States for delivery or use therein of intoxicating liquors, in violation of the laws thereof, is hereby prohibited.

Section 3. This article shall be inoperative unless it shall have been ratified as an amendment to

the Constitution by conventions in the several States, as provided in the Constitution, within seven years from the date of the submission hereof to the States by the Congress.

### **Prohibition's legacy**

"So Prohibition is dead; ancient history," Dave said.

"Not really. Its children live on."

"What do you mean?"

"The United States is a radically different country because we had once had Prohibition. It changed it in a lot of ways."

"Give me examples."

---

*...when Prohibition ended, the bureaucracy didn't want to die with it. Roosevelt recognized the political expediency of keeping these people employed and found a new evil for them to pursue.*

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"There has always been 'organized crime' in various cultures and at various times. But crime as an industry is largely a 20th century American phenomenon, and it started because the 18th Amendment gave criminals money-making opportunities that never existed in this country before. And criminal interests became so large and powerful that, after Prohibition was repealed, the considerable power and wealth of the criminal organizations was invested in other activities, both legal and illegal. One of the problems with the legal ventures of many of these criminal organizations is that they would often still use illegal procedures, including violence, to eliminate competition.

"Among the illegal enterprises they still engage in are gambling and drugs.

"Prohibition also had another questionable legacy, and that was the War on Drugs."

"How do you figure that?" I asked incredulously.

"Like all bureaucracies, when Prohibition ended, the bureaucracy

didn't want to die with it. Roosevelt, recognized the political expediency of keeping these people employed, and found a new evil for them to pursue. This time it was an evil few partook of."

"And that was drugs," I guessed.

"That's right. The aggressive enforcement of drug laws came immediately after Prohibition ended. The victims then were blacks and people of Mexican decent. Whites didn't do drugs. But making drugs illegal not only kept the bureaucrats employed, it ensured that they became the purview of organized crime. Three decades would pass before drug use spread to the white middle class. Then, drug sales mushroomed. Once again people were corrupted by a crime that only recently had not been a crime at all. The prison population has more than tripled in the last 17 years, and the increase has been almost entirely due to drug crimes. Yet, you'd not only be hard pressed to find anyone who thought it was working, but most experts will concede that they've actually made the problem worse.

"And to cover up its failures, the government has felt compelled to become even more coercive, resulting in no-warrant search and seizure laws, civil forfeiture, unconstitutional gun-control laws, etc. The government's claim is that if we'd just divest ourselves of a few of our civil rights, the drug problem would go away—although they don't quite put it in those words."

Dave rubbed his chin as if thinking.

Mac went on, "They called Prohibition the 'noble experiment,' but it created more problems than it had set out to solve."

Dave was still thinking.

"I'm sure the guys who passed it had noble intentions," I said.

"I'm not sure there's anything noble about threatening to throw someone in jail for their own good. The worst we can say about alcoholism or drug addiction is that it's a disease. It would be like throwing people who

eat meat in jail because it causes heart disease. Or giving people a criminal record because they had cancer.”

“Wait a minute,” Dave said. “If the Volstead Act needed the 18th Amendment to make it legal, what makes the anti-drug laws legal.

“In 1918, the American public understood that. But the War on Drugs is Prohibition without an amendment to support it.”

“What does that mean?” I asked.

“It means they are unconstitutional laws and those who enforce it—and all who take oaths to uphold the Constitution nowadays—are committing felonies when they enforce it.”

Mac laughed. “I’d always suspected it, but now it’s confirmed, we are being governed, policed, and tried by criminals. Even if it’s only a technicality, they’re criminals. In the same way a judge gives a jury instructions to bring guilt if the prosecution has shown the defendant has broken the law, regardless of how we feel about the law, we would have to bring guilt against any cop, prosecutor, or judge who has ever enforced a drug law.

“In fact, since the Supreme Court has ruled that any law in violation of the Constitution is void, anyone breaking a drug law is technically not in violation of breaking any law at all. It’s a nice little technicality our government overlooks and wants us to overlook. And as long as we are content to sit at home and watch TV instead of protect ourselves, we will overlook it and our rights will be steadily eroded.”

“So you’re endorsing drugs,” I said triumphantly.

“Because I’m insisting that those who govern us adhere to the Constitution, I’m endorsing drugs?” He laughed again. “Those who want to take shortcuts around the Constitution would like to have you think so.”

“Your kettle’s whistling,” Dave said, and he got up and went into the kitchen.

“But how can you say they’re criminals when they’re really just following orders?” I asked.

“It’s the United States who determined that following orders is not a defense—at the Nuremberg Trial.”

I must have looked puzzled.

“That’s when we tried the Nazis after World War II. It was the defense they used. Anyone using that defense is, in fact, taking the Nazi position.”

“Another legacy of Prohibition was that there was more consumption of alcohol after Prohibition was passed than there was before it.

“Not only that, but one of the objectives of Prohibition was to get men out of the saloons and back home. But Prohibition made drinking glamorous, and not only were men heading out to the speakeasies, but women were too. And not only that, but where before the saloons had been filled with laborers, now it was middle class men and women going out to drink.

“Another thing to remember is that people in the 1920s were unwilling to entertain anything that might bring us closer to a police state, and the results of the Wickersham Commission, if you’ll remember, was that Prohibition was unenforceable unless we were willing to become a police state.

“Americans don’t seem to be so reluctant today, and the media isn’t as concerned. Civil forfeiture laws would never have been tolerated in 1920. Today, the only people who complain about them are the innocents caught up in them. But not only are innocent citizens losing property without hearings or trials, but these laws are corrupting police departments nationwide.”

“How so?” I asked.

“The original intention of civil forfeiture was that the funds raised would be added to police budgets to fight crime. But the reality is that almost immediately the amount raised by forfeiture became part of the police budget.”

“Meaning?” I asked.

“If a department raised \$100,000 through civil forfeiture, that was supposed to be \$100,000 extra to fight crime. But the bureaucrats and politicians immediately cut the department’s funding by \$100,000. So the police now have to rustle that money out of the public, whether the citizens have broken a law or not. In Washington, D.C., black citizens are routinely shaken down, and money and jewelry is confiscated to meet the police budget.

“In Malibu, California, a man, Donald Scott, was killed when police stormed his property to confiscate it because someone said he was growing pot. He wasn’t. The Ventura County D.A., Michael Bradbury, has accused the L.A. Sheriff’s Department and various federal drug enforcement agencies of conducting the deadly raid just to get the estate through civil forfeiture.

“What’s happening, even though at the moment it’s on a relatively small scale, is that the police in this country are now robbing and killing our citizens for money.”

“You can’t say that,” Dave said as he came back into the room and handed Mac his coffee.

“I just did.”

Dave sat down and we were all quiet for about a minute.

“How’s the fishing?” Mac asked.

“We can’t fish the river,” Dave said. “The fish are spawning. But the lake is open.” He looked up at the clock. “John and I haven’t been fishing since fall.”

Mac looked at Dave without saying a word.

I turned back to my computer. “I have a magazine to turn out,” I said.

“Twist our arms and we’ll go,” I heard Dave whisper.

“Let’s drag him out and make him go fishing,” Mac whispered back.

“Woo-hoo,” I yelled and turned my computer off. Δ

# Build an all-purpose ladder

*By Robert L. Williams*

**T**he story never varies. If I am doing outside work and need a ladder, I spend nearly as much time trying to set up the ladders as I do in completing the actual work. I find that I need more room, more height, more hands, and more patience for me to handle chores of modest difficulty because of the ladders and their problems.

Ladders, used outdoors, are always on uneven terrain, it seems, and there is considerable danger of falling, dropping and damaging materials, or enduring unreasonable difficulties. So we set out to correct the situation and in the process construct an all-purpose ladder that would meet all of our needs.

Here's what we managed to accomplish: my son Robert III and I built our all-purpose ladder, which is in reality several ladders that solved our problems immediately. First, we have the regular step ladder that everybody knows and hates. But ours is different in that the step ladder is built so that someone can work on both sides of the ladder.

This dual nature of the ladder permits one of us to climb the back side and hold lumber or other materials in place while the other one climbs the



*Figure 1*



*Figure 2*

front side to do the nailing or marking or whatever else needs to be done.

But that's not all. If we need two straight ladders, we can simply separate the step ladder and we have two ladders.

If we need to climb higher than the ladder will permit, we make a couple of quick adjustments and we have an extension ladder that is four feet higher than the regular piece of equipment. We can extend the step ladder from 8 feet to 12 feet, and we can do the same with the separate straight ladders.

But that's not all. What if one leg is too high or too low and the ladder(s) lean? We have that covered, too. Our ladder has self-leveling adjustments that can be made within seconds.

And what did it cost us to build this ladder—\$280? Not even close. We have a total of less than \$6 tied up in the entire ladder and its adjustments.

Want to build one? Here's how:

We started with 2-x-4 pine rails and 1-x-4 oak steps or treads. You, if you decide to build the ladder for yourself, will need four of the 2-x-4 timbers and 12 steps. You will also need a top

plate (made of 1-x-6 pine) and two 2-x-4 support and stabilizing timbers for the sides of the ladder. These latter pieces should be about 2.5 feet long. And you will need a number of nuts, bolts, and washers, or you can do the whole thing with either screws and nails. If you use bolts, they need to be 4.5 inches long. Quarter-inch bolts will do fine.

When you have cut your 2-x-4s (we chain-sawed ours and cut back on costs greatly), you can stand them, edges facing out from the wall, so that they lean against the wall at the angle you want to have for the ladder. A reasonable angle can be reached by setting the bottom of the 2-x-4s three feet or so from the wall.

Now use a level to help you mark the bottom and top cuts so that they will be horizontal when the cuts are finished. Cut all four 2-x-4s at both top and bottom.

Next, mark the locations of the steps or treads. We spaced our steps one foot apart, so measure off the step



*Figure 3*

locations and mark them. Lay them off from both sides and connect the marks with a pencil mark across the entire face of the timber. If your treads are to be one inch thick, make another mark parallel to the first one but one inch either higher or lower. Do this for all step locations.

Next, start at the bottom of the rails and measure and mark off locations two inches apart, or 1.5 if you prefer. These marks should be only pencil





*Figure 4*

dots along the center of the rail. When this is done, drill a quarter-inch hole through the rail at each of the marks.

Cut four lengths of 2-x-4 one foot long and mark and drill these the same way. When all four are finished, use bolts and wing nuts to attach the lengths to the inside of the rails. Tap the bolts through the holes to be certain that they will move in and out of the holes easily.

These are the leveling strips. When you set the ladder up, if one leg is two inches off the ground, remove the wing nut and bolt in that leg and slide the leveling strip down until it reaches the ground satisfactorily. Then re-bolt



*Figure 5*

the leveling strip. You can do this with one, two, three, or all four legs, if necessary.

### **Adding the treads**

Your next step is to make a rabbet cut between the tread marks you made earlier. Make the cuts at least one-fourth inch deep, but preferably one-half inch deep. The ends of your treads will slide into these rabbet cuts or notches so that they cannot slip out and cause you to lose your footing.

On the outside surface of all four rails you can lay four-foot sections of 2-x-4s and drill holes at the top and bottom of the sections and rails. Notice that in Fig. 1 the rabbet cuts have been made, the treads installed, and the four-foot strips are being attached. Drill a hole every 12 inches in the four-foot section so that you can extend the ladder one foot at a time, up to four feet.

Note also in the photo that the bottom treads are also supported by braces. Fig. 2 shows the location of the braces.

Cut your treads in the following manner: The first should be at least 15 inches long. The second should be 14, the third 13, and so forth to the top of the ladder. When the treads are installed, use screws driven through the outside of the rail and into the end of the tread. This is double protection to be certain that the steps do not pull loose and cause an accident.

### **Adding a top cap**

When both sections are completed, cut a top cap like the one shown in Fig. 3. The cap should be long enough and wide enough to cover the entire ladder top. Attach the cap by drilling pilot holes and installing long wood screws to keep the cap in place, also shown in the figure. If you wish, you can cut two cap pieces and install them separately so that you can fold the ladder easier.



*Figure 6*

### **Adding cross supports**

Finally, as shown in Fig. 4., attach the cross-arm support pieces. Notice that the ladder is sitting on uneven terrain and the position causes the ladder to shift dangerously. The cross-arm support appears to be installed unevenly and the two cap pieces are uneven.

In Fig. 5 the cross-arm supports are level, and when the leveling strips are used, as seen in Fig. 6, the cross-arm supports are level and the top caps are again even, even on the uneven terrain.

When the ladder is extended to its full 12-foot height, the cross-arm supports and top caps are still level when an adult is on the ladder, and the ladder is fully stable.

But what about the first step, now that the ladder has been extended?



*Figure 7*



*Figure 8*

Few people can step four feet high and carry a paint bucket and brush at the same time. We used a very simple way to solve the difficulty. We drilled a one-inch hole at the one-foot level and another at the two-foot level. Then we used old pipe and drilled a

small hole in each end. We inserted the pipes through the holes and then used a cotter pin, as shown in Fig. 7, to keep the temporary step from slipping loose.

In Fig. 8 you can see the pipe steps, which work fine. When you no longer need the extended ladder, remove the cotter pins and pipes and lower the ladder to its regular height.

One final step. Notice that in Fig. 8 there are short strips just under the top caps. These strips are bolted to the rails of the ladder. The purpose for the strips is to keep the top ends of the ladder stable when you are using the equipment as a single step-ladder. If it were not for these strips, the two ends would move disconcertingly and may cause an accident. Each time you use the ladder, tighten the wing nuts on the bolts to be certain that they are snugly tight.

If you wish to fold the ladder for storage or movement, take the wing nut and bolt loose from one end of each cross-arm support and let the support swing downward. The ladder will then collapse so that it can be carried or stored conveniently.

And that's it. We devoted four hours to building the ladder, but that included time to cut our timbers and dress them. As you build your own, feel free to make any adjustments you like for your own needs.

We have used our ladder many, many times, and we find that it works wonderfully well. And we aren't likely to beat the price. Even the junk they sell in discount stores costs several times what we paid for our ladder, and ours will hold—and has held—more than 400 pounds as two adults work at the same time. Δ

## *A country moment*



*Jennifer Nordyke, age 8, gives her goat a smooch.*

(If you have a country moment you'd like to share with our readers, please send it to us at Country Moment, *Backwoods Home Magazine*, P.O. Box 712, Gold Beach, OR 97444. Please send a self-addressed, stamped return envelope if you want the photo back.

## **Try alfalfa for bigger plants**

**A**lfalfa is a natural plant growth stimulant. If applied to plants as a mulch or as a solution in water, it may produce taller, larger plants. It may also increase the number of leaves or produce larger leaves. The cost for this treatment is very low, and it takes just a few minutes to prepare.

Try this growth stimulant on potted plants, house plants, or green house plants. To make a mulch, finely chop good-quality alfalfa hay. Mix about ½ cup of the chopped alfalfa with one or two handfuls of hardwood mulch. Use this mixture as a soil covering for one plant in a six- to ten-inch pot. Water well after applying the mulch. Increased growth will be noticed in one or two weeks in some plants.

An alfalfa solution may be used instead of the mulch. Soak 1½ cups of the alfalfa pellets (from the feed store) in five gallons of water for at least 24 hours. Water the plant with about ½ cup of this mixture every one or two weeks. Δ





## Greens and rhubarb are spring tonics

By Jennifer Stein Barker

**R**hubarb and greens are classic spring tonics. The reason for this is that they are among the first things to grow to a usable size in springtime, even faster than those other delights, strawberries and lettuce.

By “greens” here, we usually mean members of the Crucifer (Brassicaceae) family like spring mustards, spinach, or wild greens like nettles. Spinach may overwinter in your area and begin growing even before the last spring frost. The others need not wait upon the last frost to be planted, and they grow to usable size within 30-45 days after planting. If you gather greens from the wild, they may be ready even earlier. Rhubarb may be used as soon as you have twice as much as you want to harvest. Don’t ever take all of a plant’s usable stalks from it, and don’t ever use the leaves of rhubarb, as they are poisonous.

The traditional manner of using greens and rhubarb is just to cook them up in water (with a little salt pork in the greens and sugar in the rhubarb). You may get the nutritional benefit of the foods this way, but this doesn’t excite the imagination much (or inspire children to adore the foods). If you would also like to make tasty meals around your spring tonics, try the following recipes.

### Lentil and greens soup

An easy soup with a full-flavored broth that serves four.

1 cup diced onion  
1 Tbsp. olive oil  
2 cloves garlic, minced  
2 carrots, diced  
1 bay leaf  
¼ tsp. celery seed  
6 cups stock or water  
1 15 oz. can diced tomatoes  
½ cup dry lentils  
2 Tbsp. tamari  
1 cup macaroni or small pasta shells  
1 tsp. dried savory, crushed  
8-10 oz. spinach or other greens

In a large pot or Dutch oven, saute the onion in the olive oil over medium heat until the onion is transparent. Add the minced garlic, and cook another three minutes.

Add the carrots, bay leaf, celery seed, stock or water, tomatoes, lentils and tamari, and simmer until the lentils are tender (30-40 minutes). Add the pasta and savory, and cook until the pasta is tender, about 10-12 minutes.

Meanwhile, wash and chop the greens into 1-inch pieces. Chop the stems finely. Stir the greens into the soup, and bring back to the boil. Serve as soon as the soup is heated through and the greens are wilted.

### Spring greens with cornmeal dumplings

You can use any kind of cooking green for this, like mustard or turnip greens. This also serves four.

1 Tbsp. olive oil  
1 cup diced onion  
½ oz. dried mushrooms, soaked (recommend Boletus)  
warm water to soak mushrooms  
2 Tbsp. tamari  
dash Tabasco  
2 lbs. spring greens, washed and chopped  
dumplings:  
1 cup whole wheat pastry flour  
1 cup yellow cornmeal  
3 tsp. baking powder  
¼ tsp. salt  
2 eggs  
⅔ cup milk  
1 cup grated jack cheese

Make this whole dish in a large, deep cast iron skillet for which you have a lid (my skillet is 10 inches across by 3 inches deep). Start by sauteing the onions in the olive oil over medium heat until they are transparent. Soak the dried mushrooms in warm water (just enough to cover them) in a small dish for 10 minutes. When they are soft, drain the soaking water onto the onions. Chop the mushrooms and add to the skillet. Add the tamari and Tabasco. Simmer until the liquid is reduced and thick.

Meanwhile, get the dumpling dough ready. In a small bowl, stir together the pastry flour, cornmeal, baking powder, and salt. In a medium bowl, stir together the eggs, milk, and grated cheese. Set both bowls ready on the side.

Wash, pick over, and chop the greens coarsely. Add to the skillet, and cover with a lid. Turn the heat to low, and cook just long enough to wilt the greens. Stir to mix the greens and the onions.

Combine the two bowls of dumpling ingredients by pouring the dry mixture into the wet mixture. Stir just to combine (don’t overmix and don’t worry about a few lumps or a dry spot), then drop by spoonfuls over the greens in the skillet. Cover with the lid, and simmer on medium-low heat for 16-18 minutes, until the dumplings are firm and springy.

Serve immediately by spooning the dumplings and sauce into soup plates.

## Rhubarb buttermilk cake

Rhubarb needs no added moisture to make a cake, so to get great flavor, I use powdered buttermilk (available at health food stores or in the powdered milk section of the grocery). This makes one 8 by 8 inch cake of 16 pieces:

1/3 cup finely chopped walnuts  
1 1/3 cups whole wheat pastry flour  
1/2 tsp. baking soda  
1/4 cup buttermilk powder  
3 cups diced rhubarb  
1/3 cup honey  
1 Tbsp. oil  
1 egg  
1 tsp. vanilla

Preheat the oven to 350 degrees and oil an 8 by 8 by 2 inch square pan lightly. Sprinkle about half the chopped nuts over the bottom of the pan, and set aside.

Measure the flour, baking soda, and buttermilk powder into a medium bowl. Stir until well blended. Dice the rhubarb 1/4 to 1/2 inch (to your taste, it does not need to be perfectly regular). Toss the rhubarb with the dry ingredients and set aside.

Measure 1/3 cup honey, and add the oil, egg, and vanilla to it right in the measuring cup. Stir together well, then scrape it out over the rhubarb mixture. Toss and stir until ingredients are thoroughly moistened. The mixture will be stiff.

Spoon the mixture into the pan, being careful to distribute evenly over the nuts without disturbing them. Push down and smooth over the top. Sprinkle the remaining nuts over the top, and bake for 35-40 minutes, or until the cake tests done.

Let rest in the pan 10 minutes to cool, then slice 4 times each direction and remove the pieces to a rack with a spatula. Serve warm, or let cool thoroughly and then store in an

airtight container. This resists becoming soggy, but it is best eaten the first or second day.

## Rhubarb roly-poly

This is great for breakfast or a not-too-sweet dessert. The recipe makes a 5 by 9 inch loaf.

### Dough:

1 cup warm water  
1 Tbsp. yeast  
1 tsp. honey  
1 egg  
1/2 tsp salt  
1/4 cup oil  
1/3 cup honey  
1/4 cup milk powder  
2 Tbsp. soy flour  
1 Tbsp. gluten flour (opt.)  
3-4 cups bread flour

### Filling:

1/4 cup honey  
2 cups diced rhubarb (1/4 to 1/2 inch)

In a large bowl, proof the yeast with the honey in the warm water. When the yeast foams, add the egg, salt, oil, and honey. Mix together the milk powder, soy flour, gluten flour, and first 2 cups of bread flour. Add to the yeast mixture, and beat well until strands of gluten form. Add enough more bread flour to make a stiff dough. Cover and let rise for 1/2 hour while you dice the rhubarb.

Dice the rhubarb 1/4 to 1/2 inch. Don't worry about making it regular. Pour the honey over it and stir. Set aside.

Lightly oil a 5 by 9 inch loaf pan. Set aside. Turn the dough out onto a floured board and knead until smooth and springy, 5-7 minutes. Roll out to an oblong about 9 by 15 inches. Spread the rhubarb openly over the dough oblong, with its juice. Starting with a short edge, roll the dough up into a 9 inches long loaf. Place the loaf in the pan. Let rise until increased in bulk by 50%.

Bake in a preheated 350 degree oven for 40-50 minutes, until the bread tests done. Δ

Visit the *Backwoods Home Magazine* website at:  
[www.backwoodshome.com](http://www.backwoodshome.com)

## Do you have a good recipe for stir-fried rattlesnake?

By Don Fallick

Generally speaking, I don't go looking for rattlesnakes. They keep the rodent population under control, and they seldom attack humans. Rattlers are afraid of people and don't associate with them by choice. I don't believe in disturbing the balance of nature if I can avoid it, but when I see one close to the house, I know something is wrong. Usually it means the pressure of overpopulation has forced it to go where no sane rattlesnake should be. The solution is to reduce the population.

At first it might seem that the best way to do this is to shoot the snake, using a gun loaded with snakeshot. It's quick, it's humane if you hit it in the head, and it keeps you out of striking distance of the snake. But you may not have a gun handy, and it's dangerous to shoot at a snake in close quarters without snakeshot because of the possibility of ric-



ochet. Whatever you do, you must do it fast or the snake will get away, only to threaten you or your family at another time. Luckily, rattlesnakes are rather easy to kill with a shovel or hoe.

The snake can only strike as far as its body length—a maximum of about three feet in most species. Even a short-handled shovel is longer than that. The best way to kill a rattler is to hack off its head with a hoe or shovel as it tries to slither away. Aim for the neck, behind the triangular head, to avoid squirting poison out of the poison sac in the back of the head. Another good strategy is to immobilize the snake's head with a rake or even a long, forked stick. Crush the head with a club of some kind or cut it off with an axe. A dead snake will thrash for quite a while after the spinal cord is severed. Also, the jaws may still bite reflexively, and the fangs may drip venom, so it's best to avoid picking up the head in your bare hand. I usually dig a hole deep enough that the dog won't dig it up, then bury the head under rocks. But I don't bury the body. I don't believe in wanton killing, and rattlesnakes make mighty fine eating.

People will tell you that rattlesnake meat tastes like chicken. Actually, it tastes like rattlesnake. It has a stronger flavor than chicken but a similar texture. While it can be prepared any way that chicken can, there's not as much meat on a snake as there is on a chicken. So it works out best in a dish where the meat is added for flavor, but is not the main ingredient. Stir-frying is the best way I have found to prepare fresh rattler. It's perfectly suited to the many small pieces of meat you'll end up with, and the subtle flavor blends well with the almost-fresh vegetables produced by stir-frying.

Skin the snake by grasping the neck in one hand and pulling the skin inside out. Filet the snake by stripping off the long muscles on either side of the spine, and throw the rest away. It's not worth the effort to get at. Cut the filets up into inch-long sections. They may still be twitching when you do this: reptiles take a long time to die, but never fear, cooking will render them thoroughly dead.

For stir-frying, you will need several cups of vegetables. The exact amount and kind of vegetables will vary, depending on availability, taste, and the number of people present who are willing to eat a snake.

1 rattlesnake, fileted  
 1/2 sweet, white onion  
 or 1 medium bunch of scallions, sliced thin  
 1 or 2 bell peppers, red or green, sliced  
 1 cup of mushrooms, sliced  
 1 cup of bean sprouts  
 1 cup of snap peas, snow peas, or immature green peas, in pods  
 1 or 2 cups total of other fresh white, yellow, or green vegetables in season, sliced thin or diced  
 1 cup of cooked white or brown rice per person  
 1/2 cup of wok oil (see below)  
 1 cup of commercial or homemade stir-fry sauce (see below)  
 1 roll of paper towels  
 or clean, disposable, cotton rags

### Wok oil

Mix together:  
 1/2 cup of olive or canola oil  
 1 pressed clove fresh garlic  
 or 1/4 teaspoon garlic powder (*Do not use garlic salt.*)



### Stir-fry sauce

Mix until thoroughly blended:

1 cup soy sauce

1/4 teaspoon powdered ginger

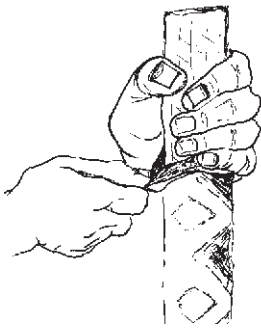
1/4 teaspoon powdered mustard

1 teaspoon sugar or honey

2 teaspoons catsup

Garlic and/or onion to taste

Slice the meat into thin strips. Slice the onion or scallions, bell peppers, mushrooms, and other large or thick vegetables into pieces thin enough that they will cook almost instantly. Keep each ingredient separate. Leave the pea pods and bean sprouts whole; they will cook quickly enough as is. The idea in stir-frying is to cook each kind of food at a very high temperature, very briefly. This allows the food to cook all the way through without losing its natural, "raw" flavor and texture. Flavors are not mixed until the very last, so the mixture tastes more like a salad than a stew. Begin by preparing the rice in your favorite way. While it is cooking, you'll do the stir-fry.



Nothing works as well for stir-fry as a wok, but if you don't have one, you can substitute a deep cast-iron skillet. Heat the wok very hot, then slide in a tablespoon of room-temperature wok oil and immediately dump in the snake meat. Turn constantly with a metal or wooden turner. Allow some of the meat to rest on the bottom of the wok for a few seconds only, then scrape it to the

side to stay warm while another portion of the meat is cooking. Cook the meat for one to two minutes only, until each piece is about half-cooked. Then set it aside in a covered dish or in a warm oven to keep warm until the vegetables are ready. Wipe the wok dry with a thickly-folded paper towel or clean, disposable cotton rag so the vegetables are not contaminated by the meat flavor while they are cooking. Heat the wok very hot again, and put in another tablespoon of room-temperature wok oil.

Cook each of the vegetables the same way. Add each kind of vegetable to the meat when it is half-cooked, and go on to the next vegetable. Dry the wok, reheat, and add fresh wok oil each time. This allows each kind of food to cook separately, sealing in the flavors so they don't mix. When they are all half-done, stir all the vegetables and the meat in the wok together; add half of the stir-fry sauce, cover, and cook at medium heat for one or two minutes, until the meat is done. Serve over rice. The rest of the stir-fry sauce can be added by each lucky diner, to taste. Δ

### *The Eighth Year*

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## Mom's wash was rainwater clean

*By Barbara Kesser*

**F**or the longest time after our family moved from Chicago to a Minnesota farm in the early 1940s, my Mom was called the Greenhorn Farmerette by the old-time farmers living down the road from our place. They're probably still talking about her...that strange city lady who lived on the Peterson place and ran around in thunderstorms "gathering water."

It all started one spring day when Mom found a rain barrel of dark brown oak firmly planted into the dirt and rotting leaves behind the spirea bushes.

"Help me get this barrel over to the corner of the house," Mom shouted gleefully. "I've always wanted to wash clothes in rainwater—it's soft water, you know—and now I have the barrel for rain!"

In the dictionary, a barrel is defined as "a bulging cask greater in length than in width," and that did fit the description of the one Mom was trying to drag closer to the door. I pulled at it with her, since a barrel of rainwater near the kitchen door was going to be 60 feet closer than the well house near the barn. Electricity pumped the water up, but aching arms carried all our water into the house. It seemed to me someone was always bringing water home—even old Grandpa, who lived with us.

So, with Dad's help we got the barrel in place and waited for rain.

Mom's excitement was catching, and as electric as the lightning in that first (for us) country thunderstorm. When it finally got too dark to "check the barrel" anymore, Mom told us to bring all our dirty clothes downstairs for the next day's washing "in rainwater."

But in the morning, Mom found no shimmering rainwater reflecting back at her from the dark, dry wood of the "bulging cask." Only a little water had

dripped from the eaves above the barrel, almost like a tease of what could have been.

Mom sputtered and fumed a while, then went about the house collecting pots and washpans, and we heard her mumbling, "Just you all wait until the next storm."

One unbearably hot, humid afternoon, dark clouds rumbled over the sun and set up a mighty roar of thunder. Lightning, zigzagging from sky to ground, lit up all the corners of the house and the chicken coop where Mom had said she was going to put the rain-collecting pots and pans as soon as she could get around to it. And what better time to get around to it than right now in the downpour.

So, with her arms holding the big laundry tub filled with smaller pots and pans, Mom ran out into the yard in her sleeveless house dress and her most comfortable penny loafers. Instantly, rain plastered Mom's hair and dress to her body until she looked like a bald, naked nymph playing tag with the lightening bolts. She really had picked the right spots to gather rain. In a few minutes each pot and pan was full. Back and forth she ran until the rain barrel overflowed. Then, looking like she'd never dry out, Mom leaned over the barrel, softly murmuring, "Rainwater. Soft rainwater."

Leaving her shoes outside, Mom stood at the door in her dripping dress and smiled. "I got it!" she gloated.

When Dad got home from town after the storm, he couldn't believe Mom had been "so dumb" as he said, to be out there in all that rain and lightning.

"You'll know it was worthwhile when you smell your clothes the next time they're washed. Between that rainwater and the sun . . . they'll be fantastic!"

"Nuts!" Dad said and went right to the barn, brought back a ladder, and fixed the gutters above the rain barrel.

For most of the summer, then, our clothes—even the overalls—were soft and wonderful to smell. But one Monday (Mom always washed clothes on Monday) at the end of August, Mom carried a bucket of rainwater into the house and said to me, "Look at the color. Does it look funny to you?"

I stared at the water, tinged slightly yellow, but it didn't seem too extraordinary to me, so I said, "Maybe it's the bucket."

"I don't know," Mom said as she went about heating the rainwater as usual in the big wash boilers set on two of the burners of the big, black iron wood-burning stove.

It rained again and again, and each time Mom washed clothes, she wondered about the "funny looking color" of the rainwater.

"Maybe the barrel needs to be scrubbed out again," Dad offered, and Mom agreed with that. She'd empty the barrel out after the next wash and scour it again. There was still too much rainwater in the barrel to do it now, she said.

Early the following Monday, Mom brought up the long, skinny boiler from the basement and walked out the back door to get the rainwater. She saw Grandpa, carrying his nightbucket, as he came out of the "little house in the alley" as we called our outhouse. She was about to call out "Good morning" when she saw Grandpa veer toward the corner of the house where the bulging cask of rainwater shimmered in the early morning sun.

Down into the glistening water Grandpa put his nightbucket and after swishing the rainwater around and around in it until he was satisfied his bucket was clean, Grandpa poured the slightly tinged water back into the rain barrel.

Mom gasped. Grandpa looked up—and the storm that followed would have filled at least two barrels—if there had been rain. Δ

# There's still a lot of life left in dead trees

By Tom R. Kovach

If there's an old tree in your yard or pasture that's either dead or showing signs of decay, don't be too hasty about cutting it down and hauling it away. Old, dead, or dying trees still serve as a home for a wide variety of birds and other wildlife.

According to Bill Vermillion, a biologist with the Natural Heritage Program of the Department of Wildlife and Fisheries for the state of Louisiana, there are at least 85 species of birds in North America which are "cavity nesters" using trees for nesting. (I guess they had the bird-house problem figured out long before humans started building them.) Some of these cavity nesters include owls, woodpeckers, chickadees, bluebirds, and wrens.

Woodpeckers are equipped to build their own cavities. With their sharp, pointed bills they can bore and dig into trees. They have stiff tail feathers that provide leverage as they peck or tap into wood. They have strong clawed feet to grip into tree bark. Most other birds and mammals are not similarly equipped and must take what they can find.

The wood duck, for example, is one of only a few cavity-nesting waterfowl, and there are few cavity dwelling birds less equipped to build their own holes. They have webbed feet and bills like other ducks, so they can't grip vertical surfaces or dig their own nests. A hole in a tree is the preferred nesting site, however, and as long as it is near duck habitat, that's where you'll find nesting wood ducks. This remarkably distinctive waterfowl species has made a tremendous comeback from near-extinction at the turn of the century. A fallen tree near prime habitat (wooded lakes, swamps, and sloughs) will assist in its re-establishment.

Birds are not the only animals you'll find living in a dying tree. Mammals such as red and gray squirrels, flying squirrels, raccoons, and opossums also make use of holes in trees. Squirrels are the acrobats of the rodent family and can provide hours of amusement as you watch from your window or other vantage points. Raccoons and opossums also like to frolic and are fun to observe.

Turtles, lizards, and other reptiles and amphibians also find suitable homes in hollow trees.

These old trees not only provide shelter, they are also a source of nutrients. They supply birds with food in the form of insect larvae. Other animals will feed on plants, fungi, and bugs that thrive in and on rotting wood.

Most cavity excavators need dead or dying trees to work with, and even a tree as small as four inches in diameter and six feet tall can serve the purpose. Trees with broken tops or holes, fallen trees on the forest floor, and even stumps are useful.



Check local ordinances, as there may be regulations for removal of dead or dying trees. If removal is not required, you may want to leave the tree standing. Prune rotted branches to make the area safe for people below, or if the tree is too close to a home or out-building.

If you haven't already, look around your yard or pasture to see if you have any old, dead, or dying trees. And the next time you're walking in the woods or are doing any bird or wildlife watching, observe the cavities in these old trees. See what comes and goes—you may be surprised. Finding an old tree with residents is also a good way to introduce young people to the joys of observing wildlife. Δ

## Passing Time

Riding in the front seat  
with my head on your shoulder,  
there's nothing in the world but sky  
and the tops of telephone poles  
close to the road.

When I was small and carried  
along  
in the back seat  
of the old brown station wagon,  
counting poles and watching sky  
made me impatient and weary.  
Now it only reminds me of how  
quickly they go by,  
and how seldom I'm in a position  
to count them

Melissa Sullivan  
Petersburg, IL



## Grow sweet Tetsukabuto squash

*By Alice Brantley Yeager*

**B**y George, I think we've got it. It's name is Tetsukabuto and it is a hybrid winter squash with a flavor that is tasty enough to rival the pure goodness of a prime sweet potato. To say this is to venture out on a limb as many folks are mighty fond of quality sweet potatoes, especially when they are served in the form of a delectable pie or pone.

The Tetsukabuto squash (Let's call it "Tet" for short) recognizes no boundaries, but it's easy to grow. A long garden fence will serve nicely as a support for this import from Japan. If your garden area is very small, however, I don't recommend trying to jam Tet into it, as Tet needs space to spread out. Four or five Tet vines should provide plenty of squash for a family of four with enough left over to share or sell. Fringe benefits come in the form of beauty. Large green leaves mottled with white and bright yellow flowers are outstanding.

My first experiment with Tet made me realize that the vine will make an all-out effort to cover everything in the garden if not trained in the way it should go. Nothing was beyond its determined reach forcing me to take bold steps with a pair of strong clip-pers. That was the summer I had to spend a considerable amount of time

away from the garden due to foot surgery and Tet took advantage of my absence to escape and climb a large sweetgum tree nearby. When I discovered what had happened, I gave up and let the vine go its merry way. Go



*Freshly cut Tetsukabuto squash ready to be steamed.*

it did right up into the tree where it dangled its dark green fruits like comic-strip bombs. Harvesting had to be accomplished with a tall ladder and a long limb lopper, but the situation prompted great conversation.

### Cultivation

Like most squash seeds, Tet seeds may be started indoors in 3-inch peat pots, but if one prefers to plant seeds directly in the garden, it is advisable to wait until ground has warmed up before planting. Squash seedlings are like some other warm weather plants—okra, watermelons, etc—that will not do well if planted before spring has lost its chill. Patience with the season will have its reward.

Tet has an ordinary pH requirement of 6.0 to 8.0 and will do well in most fertile garden soils. Ground should be well worked leaving no clods. Well rotted compost dug into the soil is

very helpful and a sunny, well drained spot is an ideal location.

If planting in a row, allow about four seeds to a foot of row and, if planting in hills, put five or six in a hill. Plant seeds 1 inch deep and, when seedlings are about 2 to 3 inches high, thin to stand 2 feet apart in a row. If in hills, leave three of the strongest plants to a hill. I have found these

seeds not to have a high rate of germination, so I always plant a few extra for insurance.

When the vines begin to reach out, I guide them onto a fence by loosely tying them to their support with strips of old nylon panty hose. Once in contact with the fence, they're on their own except for an occasional restriction to keep them from taking over.

The size of Tet's fruit makes it very adaptable to fence culture as the fruits average 7 to 8 inches in diameter and weigh 4 to 5 pounds. Toward the end of the season, fruit will tend to be smaller as the weather cools down. Being hybrid, the vines will continue to put on squash until very late summer.

In southwestern Arkansas (Zone 8) I have encountered no disease or insect problems with Tet, but in another part of the country there may be enemies such as vine borers. County Extension Agents will have advice about local pests.



*A pie made with the pulp from a Tetsukabuto squash.*

Living in an area where dry weather often poses big problems in summer, I am a believer in a thick organic mulch (pine needles, leaves, grass clippings, etc.). When rainfall becomes very scarce, it is essential that plants be given the benefit of mulch if they are to survive and produce until fall. Mulch gives gardeners more time to spend on something besides watering and the breaking down of the organic matter adds humus to the soil.

## Harvesting

When frost is predicted squash should be gathered ahead of the freeze. Harvesting requires the use of a pair of sharp clippers, as squash stems are tough. At least an inch of stem should be left on the fruit.

Tet is a good keeper and will last for several months if stored properly. A

cool place away from direct sunlight and with good air circulation is recommended. Some folks suggest washing winter squash with a weak solution of bleach and water before storing, but we have not done this and have had no problems with squash in storage.

Now we come to the good part—the part wherein we actually get to savor the results of our labor. In Tet's case, the result is definitely delicious.

Prepare a squash for culinary use by cutting it in half lengthwise and removing seeds and stringy interior. Place halves face down in a pan with a lid (A small roaster is ideal), add 2 cups of water, cover and place in a 350 degree F., oven. Allow squash to steam until tender—about 30 minutes. Remove from oven and let the squash

cool until it can be handled comfortably.

Peel off skin and discard. Cut orange flesh into chunks and mash with a potato masher or puree in blender. (Add a little water if using a blender.) If you have more pulp than needed for a recipe, the excess may be frozen in an airtight container for later use.

This versatile squash may be used as a substitute in recipes calling for sweet potatoes or pumpkin. The amount of sugar required may be lessened due to Tet's natural sweetness. (See pie recipe.) As to health benefits, Tet is particularly high in Vitamin A and potassium.

The coziness of a warm kitchen in winter, the aroma of freshly baked Tetsukabuto squash pie and a slice of that pie to have with a cup of hot coffee—well, we consider that pleasurable living in our part of the piney woods.

A good source of Tetsukabuto squash seeds is Pinetree Garden Seeds, Box 300, New Gloucester, ME 04260.

## Tetsukabuto squash pie

1 9-inch unbaked pie shell  
2 cups mashed or pureed cooked pulp of Tetsukabuto squash  
½ tsp vanilla  
10 oz. evaporated milk  
¼ cup brown sugar  
2 Tbsp unbleached flour  
½ tsp nutmeg  
½ tsp ginger  
⅓ cup chopped pecans

Thoroughly mix pulp, vanilla, and milk. Mix sugar, flour, nutmeg, and ginger together and stir into the wet mixture. Pour into the pie shell and bake in 375 degree oven until the middle of pie is almost firm but still sticky. Remove from the oven and sprinkle with pecans. Continue baking until a straw inserted in the center comes out clean. Entire baking time takes 40 to 45 minutes. Δ

## *A country moment*



*Emily Williams, age 4, of Kelley, Iowa, makes friends with a tomato worm.*

(If you have a country moment you'd like to share with our readers, please send it to us at Country Moment, *Backwoods Home Magazine*, P.O. Box 712, Gold Beach, OR 97444. Please include a self-addressed, stamped return envelope if you want the photo back.)

## Barbecue — it's America's national cuisine

*By Richard Blunt*

In 1920 Henry Ford and Thomas Edison pooled their collective genius to find a practical solution for using the growing mountain of wood scraps that were a by-product of manufacturing the wooden auto parts that were used in Ford's successful Model T line of automobiles. After fretting over the problem for some time, Ford hit on the idea of turning the scraps into charcoal and grinding them into powder. He then teamed up with Edison who designed a processing plant to mix the charcoal powder with a starch binder to form the mixture into the uniform little pillow shaped things that we now call charcoal briquettes. This set the stage for the advent of barbecue as America's national cuisine. Well, almost.

At the end of the Second World War, the popularity of barbecue increased faster than any other culinary concept. Today nearly 85% of the families in this country own some type of outdoor roasting, grilling, or smoking equipment and more than \$400 million is spent every year on charcoal briquettes to keep this stuff fired up. The popularity of barbecue has almost single-handedly elevated the once humble hamburger to the lofty position of America's favorite food.

And everyone's an expert. Mention barbecue, and even folks who are normally quiet and reserved will begin bragging about their skill with a grill or smoker. Obscure topics like the history of barbecuing or potential health hazards attributed to barbecued foods will also be tossed about.

Barbecue fanatics, myself included, will barbecue anything from hamburgers and hot dogs on a backyard charcoal or gas fired grill to whole animals slowly smoked "barbe-a-quene" (which, in French, means from whiskers to tail) over an in-ground pit.

Barbecuing, to me, is like being Alice in Wonderland—a thousand directions to go in with only one to choose. But if you have a handle on your personal taste, a few basic tools that you find useful, and a willingness to mess around with different ingredients and cooking procedures, you will find barbecuing uncomplicated and fun.

### Grills — open and covered

All the grills in the marketplace fall into two categories: open and covered. The open grill is by far the most familiar piece of barbecue equipment, and the simplest form of open grill is the familiar hibachi, a grill that is as versatile as it is inexpensive. The hibachi can be used in places that larger grills cannot. I pack my hibachi in the car on all family outings and picnics, and I have even fired it up in the house



*Richard Blunt*

during nasty weather by opening the flue and placing it in the fireplace.

At the deluxe end of the open grill spectrum is the Grillery, a handmade all stainless steel grill with a crank that precisely raises or lowers the cooking surface 16 inches. The 20-inch deep by 22-inch wide cooking surface is constructed of V-shaped stainless steel bars that channel fat and juice drippings into a collecting pan, away from the fire. The Grillery is designed to be fired with wood instead of charcoal. You can cook while the fire is still flaming by simply moving the cooking surface away from the flames. As the flames settle down, the surface can be lowered to the desired height above the coals. The standard model costs a mere \$895. If you have a real big ego or find yourself entertaining celebrities and heads of state, you should consider their San Antonio model which offers a 20 x 44 inch cooking surface for about \$1500 plus shipping.

The overwhelming favorite grill for backyard barbecue is the covered kettle grill, introduced by Weber Stevens Products in 1951. Both the charcoal and cooking grates are fixed on the kettle grill. This makes the control of heat exchange a critical factor. A common mistake made by many barbecue cooks, including me, is to ignore the instructions that come with the unit and cook without the lid in place. Grilling with the cover on eliminates flare-up, speeds cooking time, and saves on fuel costs.

The Weber is without a doubt one of the best bargains on the market. The cost of the 22-inch model in 1952 was just under \$50, a princely sum then. The latest version is priced under \$100, a bargain in today's dollars, and they last. I paid \$68 dollars for my Weber in 1986, and it's still going strong, even though I use it an average of 175 times a year. I



am one of those barbecue junkies that grills and smokes in snow, rain, and hurricanes.

But what the Grillery is to open grills, the Hasty Bake Gourmet Charcoal Oven is to covered grills. The Hasty Bake is also handmade and the cold-rolled, black-powder coated steel model can be purchased for about \$800, while their stainless steel model runs about twice that. The Hasty Bake can also be used as an oven by placing a heat deflector over the coals; this creates an even heat across the grill. Another much appreciated feature is a full-width fire door that permits refueling without opening the hood.

## Other tools

A grill isn't all you should have to have the perfect barbecue. Another piece of equipment that is nice to have is a **meat thermometer**. Most professional cooks would feel naked without one hanging from their pocket when they enter the kitchen. They are easy to use and eliminate the complaints like, "This meat is still raw" or "My meat is overdone." Here is a chart I find helpful when cooking meats, indoors or out.

Meat	Rare	Medium	Well Done
<b>Beef</b>	140 F	160 F	175 F
<b>Pork</b>		160 F	170 F
<b>Lamb</b>	140 F	160 F	170 F
<b>Poultry</b>	All domestic poultry should be cooked to 170 F		

**Long handled tongs:** I don't feel comfortable poking any food with a fork while it is being grilled. Tongs do a better job and won't do damage to the food and allow valuable juices to spill into the fire.

**Basting brush:** The expensive long handled brushes made for grilling do not baste food any better than a standard, flat, boar bristle kitchen brush.

**Long-handled offset spatula:** A nice item for turning delicate items like fish and thin 4-ounce hamburgers. If I ever lose my little 10-inch kitchen spatula with its flexible metal blade, I'll replace it with one of these long-handled offset types.

**Charcoal lighting chimney:** This is, in my opinion, the safest and quickest way to light charcoal briquettes, and it eliminates the nasty smell of lighter fluid. Follow the instructions that come with the unit, and you can't go wrong.

**Skewers** with half-inch wide flat shanks. These are great for solving the problem of food spinning around as you try to turn it over.



## Charcoal tips

1. Before throwing anything on the grill, give the charcoal at least 30 minutes, after you light it, to burn to the point where the pieces are all covered with a white ash.

2. Use only high-quality name-brand charcoal. Bargain charcoal causes more problems than cost savings can justify, such as charcoal that will not light, when lit will not burn evenly, or will fall to powder at inopportune moments.

3. Use only the amount of charcoal required for the item being grilled. Excessive amounts cause dangerous flare-ups and charred food.

4. Charcoal briquettes and natural lump charcoal burn at different temperatures: Briquettes burn at about 350 degrees F; natural charcoal burns at 600 degrees F.

5. Remember that barbecue cooking must always be a pleasure. If it becomes a chore, stop and use your oven.

## Howard's smoke-roasted pork shoulder

"This is working folks' barbecue; you fire it up in the morning, go to work, and when you get home it's ready to eat." Those are the words of an old fishing buddy of mine. He introduced himself to strangers as Amanda B. Recondwith, but his friends called him Howard. Howard made his living selling striped bass and bluefish to high priced Cape Cod restaurants in Massachusetts. His claim to fame was the fact that he had fished every inch of the Atlantic coast from Maine to Texas. He was also one hell of a cook, and barbecue was his specialty. He would tell stories of smoke-roasting whole pigs, goats, and 20-pound stuffed bass barbe-a-quene at beach parties. "And every part was eaten except the squeak," he would say.

Successful smoke roasting requires lots of time and the right kind of meat. A bone-in pork picnic shoulder is perfect for this type of laid back barbecue. Howard would start smoking a five-pound shoulder at 8 or 9 o'clock in the

morning, go fishing for 4 hours, return to camp at noon to add a little more charcoal and smoking wood to the fire, then return to his surf fishing until dinner time. The whole process took about 8 hours. Pork picnic shoulders can weigh up to 15 pounds and require 15 to 24 hours of smoking. This low-temperature process cooks at temperatures which seldom exceed 200 degrees F. Almost any large roast cooked this way is lightly crusted on the outside, fall-off-the-bone tender on the inside, and is permeated with the sweet, smoke-flavored moisture of its own juices. I have also included one of Howard's all purpose barbecue sauce recipes.

After the shoulder is cooked the meat can be pulled from the bone with a fork, placed on a fresh baked sandwich roll, and topped with sauce. Gather up three or four hungry friends, some hot potato salad, a few bottles of pale ale, and have a classic Southern BBQ. Amen!

**Equipment:**

A standard-size charcoal grill with a cover that has smoke holes, a 10-inch cast iron or aluminum pan, and a metal charcoal lighting chimney.

**For smoke roasting:** eight golf ball-sized seasoned hardwood chunks, (hickory, mesquite, oak, maple, apple, or other fruit tree wood) and 40 charcoal briquettes.

**Ingredients:**

1 4 to 5-pound bone-in-pork picnic shoulder  
10 juniper berries, toasted in a 350-degree oven for 10 minutes and crushed  
½ tsp. ground ginger  
½ tsp. fresh ground nutmeg  
2 Tbsp. fresh ground black pepper  
1 tsp. cayenne pepper  
1 tsp. ground coriander

**Method:**

1. Remove the pork from the refrigerator, combine the spices, then massage them into the surface of the pork. Set the pork aside for one hour.

2. Soak half of the hardwood chunks in water for at least 30 minutes.

3. Light the coals and let them burn until they are covered with a white ash.

4. When the charcoal is ready, shovel the coals to one side of the kettle. Place the soaked hardwood chips on the burning coals. On the other side place the cast iron or aluminum pan half-filled water.

4. Put the cooking grate on the grill and the meat on the grate, fat side up, directly over the pan filled with water.

5. Replace the cover on the kettle making sure the smoke holes on the lid and the air holes on the bottom are opened only half way. Smoke the meat for about four hours without lifting the lid to peek (otherwise, you're letting out the heat and the smoke).

6. In about three hours, start soaking the other half of the hardwood chunks in water.

7. After the meat has smoked about four hours, remove the lid. If your coals are about burned away, add more charcoal and place the soaked hardwood chunks on top of the burning coals.

8. Let the meat cook an additional three hours without any disturbance. At the end of that time remove the cover and give the blade bone a tug. If the roast is done the bone will easily separate from the roast. Another way to check is to insert a meat thermometer into the thickest part of the roast without touching a bone. A reading of 170 degrees F means it's done. If it is not done, it may require an additional hour of cooking.

While your roast is cooking, prepare the barbecue sauce.

**Ingredients:**

2 Tbsp. olive oil  
¼ cup onion, chopped fine  
2 cloves fresh garlic, chopped fine  
1-inch piece fresh ginger, peeled and chopped fine  
½ tsp. orange zest  
¼ cup tomato paste  
1 Tbsp. cider or herb vinegar  
¾ cup apple cider  
½ cup your favorite ale or beer (a pale ale with a strong hop taste works best for me)  
1 Tbsp. soy sauce  
¼ tsp. ground coriander  
½ tsp. fresh ground black pepper  
2 Tbsp. (or to taste) brown sugar  
½ tsp. (or to taste) cayenne pepper

**Method:**

1. Preheat a heavy-bottom sauce pot over a medium flame; add the olive oil, onion, garlic, and ginger. Sauté the mixture until the onions become translucent.

2. Combine the remaining ingredients, except the brown sugar and cayenne pepper, and add them to the onion mixture. Bring the sauce to a slow simmer, then add the sugar in small amounts until the desired sweetness is reached. Slowly simmer the sauce over low heat for about 10 minutes or until it starts to thicken, then add the cayenne pepper in small amounts until the chilli pepper bite suits your taste. Adjust the consistency of the sauce with a little of the remaining beer or apple cider and simmer five more minutes before removing the sauce from the heat.

## **Szuechuan tea smoked hens**

What follows is a barbecue concept that has its roots in Szuechuan Province, western China's land of plenty. Surrounded by high mountains to the north and the deep Yangtze gorges on the south, the area was isolated from the

rest of China for thousands of years. As a result it has developed a unique culinary style. The most outstanding characteristic of Szuechuan food is that each dish contains a number of different flavors and essences, and this recipe is a classic example of this wonderful cuisine. After cooking, the hens reveal hints of sweet, hot, bitter, salt, and aromatic tastes. This is partly due to the fact that smoke is used solely as a flavor enhancer and not as a cooking medium. I use cornish hens because their small size allows them to be cooked quickly over charcoal without becoming dry.

Before cooking, remove the skins from the cornish hens to minimize scorching and allow the marinade and the smoke to season the meat properly.

The hardware needed is the same as the Howard's smoke-roasted pork shoulder recipe, along with about 25 charcoal briquettes.

**Ingredients:**

2 fresh cornish hens, about 1 to 1½ pounds each, skinned and split in half

**Marinade:**

1 Tbsp. kosher salt  
2 tsp. whole black peppercorns  
4 juniper berries  
½ tsp. cayenne pepper  
a one-inch piece of fresh ginger, peeled and minced fine  
1 Tbsp. hoi-sin sauce

**Smoke flavoring and grilling:**

½ cup hardwood chips  
4 dried bay leaves  
½ cup loose tea leaves  
⅓ cup brown sugar  
1 Tbsp. orange or tangerine zest  
1 tsp whole anise seed

**Basting sauce:**

1 Tbsp extra virgin olive oil  
1 Tbsp sesame oil  
2 fresh garlic cloves, minced fine  
1 Tbsp soy sauce  
1 Tbsp balsamic vinegar

**Method (the day before the BBQ):**

1. Split the hens using poultry shears. If you don't own poultry shears, go to the store and buy a pair before attempting to perform this step with a knife. Remove the two outer wing segments. Peel the hens by gently pulling the skin from the neck cavity down over the leg. Wash the hens in cold water and dry them on paper towels.

2. Place the salt, peppercorns, and juniper berries in a heavy-bottom skillet and toast them over medium heat until the salt starts to brown. This should take only a couple of minutes. Let the mixture cool before proceeding.

3. Process the salt mixture with a mortar and pestle or spice grinder until the peppercorns and juniper berries are crushed. Combine the processed salt mixture with the cayenne pepper, minced ginger, and hoi-sin sauce.

4. Massage the hen halves with the marinade, transfer them to a large zip-lock plastic bag, and place them in the refrigerator for 12 hours or overnight.

**The day of the BBQ:**

1. Remove the hens from the plastic bag and wash them thoroughly in cold water. Set them aside to dry on paper towels.

2. Soak the hardwood chips and bay leaves in warm water for 30 minutes, then combine them with the tea leaves, brown sugar, orange zest, and anise seed. Set the mixture aside while you prepare the coals.

3. About 20 minutes before you begin cooking, light the charcoal and allow it to burn until white. When the charcoal is ready, shovel the coals to one side of the grill. On the other side place the cast or aluminum pan half-filled with water. Spread the smoke flavoring mixture over the coals, put the grate on the grill, and the hens on the grate directly over the pan.

4. Put the cover on the grill, making sure the smoke holes on the lid—and the air holes on the bottom—are opened only half way. Smoke the hens for ½ hour without lifting the lid to peek.

5. While the hens are smoking, combine all of the basting sauce ingredients.

6. When the smoking period is complete, remove the grill cover, the grate with the hens on it, and the water pan. Spread the burning coals into a single layer, and replace the cooking grate.

7. Place the hens over the coals and brush both sides with the basting sauce. Grill the hens for 15 minutes or until done, or their internal temperature at the joint where the thigh meets the body reaches 170 F.

## **Grilled lamb or mutton with tamarind curry sauce**

There was a time when lamb and mutton were both popular meats in this country. Unfortunately, mutton has become scarce and what we buy in supermarkets today is neither lamb nor mutton. A lamb is defined as a very young sheep taken when it is under six months old. Mutton is a mature sheep that is at least 2 years old. What we get is in between these.

True lamb is sweet tasting, delicate, and tender while mutton has a distinctive flavor and firmer texture. But even the halfway-between meat we get can be made respectable with



a little care, and down right fantastic with good barbecue. In South Africa and other parts of the world, mutton is still a popular meat. The following is a sampling of the quality of mutton cookery and barbecuing technique that is common in South Africa. They call mutton prepared like this “sosatie.” The word is derived from two Malay words: sate—meaning spiced sauce, and sesate—meaning meat on a skewer. A great feature of this recipe is that you save the marinade, cook it a little, and serve it as a sauce. Add a healthy serving of fragrant basmati rice and you experience, first hand, the taste of great international barbecue.

**Special note:** This recipe calls for a juice (tamarind) prepared from the seed of a tropical tree from India. Tamarind is sold in Asian and Indian food stores. The most versatile form comes in 7 or 8-inch blocks that look just like chopped dates. The unique flavor of tamarind has no substitute, but in a pinch the tamarind water can be substituted with half fresh lemon juice and half water.

**Equipment:**

Any size charcoal or gas grill, 40 charcoal briquettes, four 13-inch BBQ skewers with ½-inch flat blades

**Ingredients:**

2 pounds boneless leg of lamb diced into 1-inch cubes  
(Do not attempt to use tough, stewing lamb.  
Marinating will not tenderize it.)

½ tsp. kosher salt

½ tsp. fresh ground black pepper

½ tsp. cayenne pepper

1 Spanish onion cut into quarters and separated into layers (to be put on skewers with the meat)

Olive oil to coat the lamb before grilling

**Marinade:**

3 Tbsp. extra virgin olive oil

1 medium onion diced fine

1 one-inch piece of fresh ginger, peeled and minced fine

3 fresh garlic cloves, minced fine

1 cup tamarind water (see recipe below)

1 Tbsp. mint jelly

1 Tbsp. brown sugar

1 tsp. ground coriander

½ tsp. ground turmeric

1 Tbsp. Madras curry powder

½ tsp. fresh ground nutmeg

3 dried bay leaves

**Sauce:**

1 cup beef, chicken, or vegetable stock  
the remaining marinade

1 Tbsp. flour

¼ cup water

**Tamarind water:**

2 ounces tamarind pulp

1½ cups boiling water

**Method (The day before the BBQ):**

1. Prepare the tamarind water by putting the tamarind pulp in a small stainless steel or glass bowl along with the boiling water. Soak the pulp for 45 minutes, or until the pulp separates from the broken seed and dissolves into the water. Strain the mixture through a fine sieve. Press the pulp with a heavy spoon to extract as much liquid as possible.

2. Combine the salt, black pepper, and cayenne pepper. Sprinkle this mixture over the lamb, put the lamb in a large stainless steel or glass bowl, and set it in the refrigerator while you prepare the rest of the marinade.

**Prepare the marinade:**

1. In a heavy-bottom sauce pot heat the olive oil over a medium flame. When the oil is hot, add the onion, ginger, and garlic. Sauté until the onions are soft and translucent. Add the tamarind water, mint jelly, brown sugar, and seasonings to the onion mixture. Bring the marinade to a slow boil; boil for 10 minutes. Stir the marinade occasionally to prevent scorching.

2. Cool the marinade to room temperature and pour it over the diced lamb. Marinate the lamb, covered, in the refrigerator for 12 hours or overnight. Turn the meat over from time to time; this will insure even marinating.

**On the day of the BBQ.**

1. Remove the lamb from the marinade, and place 4 or 5 pieces on each skewer, alternating each piece of lamb with a couple of pieces of onion. Place the completed skewers in the refrigerator while you light the charcoal and prepare the sauce.

**Sauce:**

1. Add the stock to the remaining marinade. In a small heavy-bottom sauce pot bring the marinade to a slow simmer over medium heat. Strain the marinade, and bring it to a slow simmer again over medium heat.

2. Combine the flour and the water; stir with wire whisk to remove any lumps.

3. Slowly stir the flour mixture into the simmering marinade. After the mixture thickens, reduce the heat and cook the sauce slowly for five minutes.

**The barbecue:**

Fire up your grill when the time is right for you. Remember, if you are using charcoal let the briquettes burn until white, then spread them evenly before you start grilling. Brush the sosaties with olive oil and grill them from 10 to 20 minutes depending on how well done you like your lamb. On a standard Weber type charcoal grill, 20 minutes cooking time will result in lamb that is medium well, and not scorched.

## Tandoori murghi

This is pronounced TAN-dooree MOORGH-ee. It is an Indian barbecued chicken. In India barbecuing, baking and roasting are all achieved by a process called tandoori khana (clay pot cooking). The clay pot is called a tandoor and it is shaped like a large wine barrel. The tandoor is sunk into a hole in the ground and it is fired by placing burning charcoal in the bottom. This unique and efficient oven was invented and first used during the early part of the nineteenth century in northeastern Persia (Iran today). Whole chickens and large chunks of lamb can be threaded on specially designed long skewers and lowered into a tandoori pit to be cooked.

Any food cooked this way is referred to as tandoori food in India. In clay pot barbecue, meats, seafood, and poultry are first marinated in herbs and yogurt. The herbs contribute a bold flavor to the food, and the yogurt keeps the food moist and tender and is a flavor catalyst for the herbs and spices just as wine is in French cooking. The temperature of a tandoori oven equals the temperature of the average barbecue grill (550 degrees F to 600 degrees F), so tandoori recipes are a natural for American style barbecue. Chicken is a hands down favorite for tandoori cooking all around the world, and no article, book, or treatise on barbecue would be complete without it.

This recipe is designed for a conventional oven as well as a charcoal or gas grill. You can now enjoy good barbecue, even when there is 10 feet of snow in your back yard.

**Equipment:** A standard size charcoal or gas grill, 30 charcoal briquettes

### Ingredients:

6 chicken breast halves (boneless and skinless)  
2 Tbsp. fresh squeezed lemon juice  
½ tsp. kosher salt  
Peanut oil to coat chicken before grilling

### Marinade:

A one-inch piece of fresh ginger, peeled and diced  
3 fresh garlic cloves, diced  
1 Tbsp. water  
1 tsp. ground cumin  
1 tsp. cayenne pepper  
1 Tbsp. paprika  
½ tsp. ground cardamom  
1 cup plain nonfat yogurt

### Method:

1. With a sharp knife, make short slashes in the chicken breasts half-inch deep, and one inch apart. Combine the salt and lemon juice and massage the mixture into the chicken. Place the chicken in a shallow dish, and cover and set in the refrigerator while you prepare the rest of the marinade.

2. Using a blender or mortar and pestle, process the ginger, garlic, and water into a paste. Stir this paste along with the seasonings into the yogurt. Pour the marinade over the chicken; turn the pieces to make sure that they are coated well. Cover the dish with plastic wrap and put the chicken back in the refrigerator to marinate for at least 12 hours.

**Special note:** Do not attempt to marinate the chicken longer than 12 hours; prolonged marinating will make any meat, especially chicken, mushy and unappetizing.

**Oven barbecue for rain and snow days:** Preheat the oven to 450 degrees F. Remove the chicken from the marinade and place on an oiled wire rack set inside of a shallow roasting pan. Cook the chicken for approximately 15 to 20 minutes or until they are cooked completely. If you are using a meat thermometer, they are done when the breasts reach an internal temperature of 170 degrees.

**Outdoor barbecue:** For the rest of the year, light the coals and let them burn until they are white. Thread the chicken onto 13-inch skewers with half-inch wide blades. Spread the coals out evenly and set the cooking grate in place. Set the skewers on the grill with the slashed side of the chicken facing up. Brush the chickens lightly with oil and grill for about 10 minutes or until the breasts reach an internal temperature of 170 degrees F. Δ

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# Make your own quality rope

By Rev. J.D. Hooker

I think my own “use it over, use it up” trick is one that I learned from a retired Texas rancher quite a few years back. Thanks to this simple, ingenious, and apparently formerly vastly popular “recycling” idea, it’s been decades since I’ve needed to go out and purchase a piece of rope. For homesteaders, farmers, ranchers, and other backwoods or backcountry sort of folks, this has to be one of the simplest and most valuable ideas that I’ve run across.

It doesn’t seem to matter much what sort of farming or livestock raising endeavors you get involved in. They all seem to call for some quantity of hay, or straw, or both. Which just naturally leaves you with some quantity of “straw strings,” or used bailing twine, left laying around after the bales are used.

8" to 10" approx.



Figure 1. 2" by 2" by 18" oak, one end trimmed to form the body of the crank

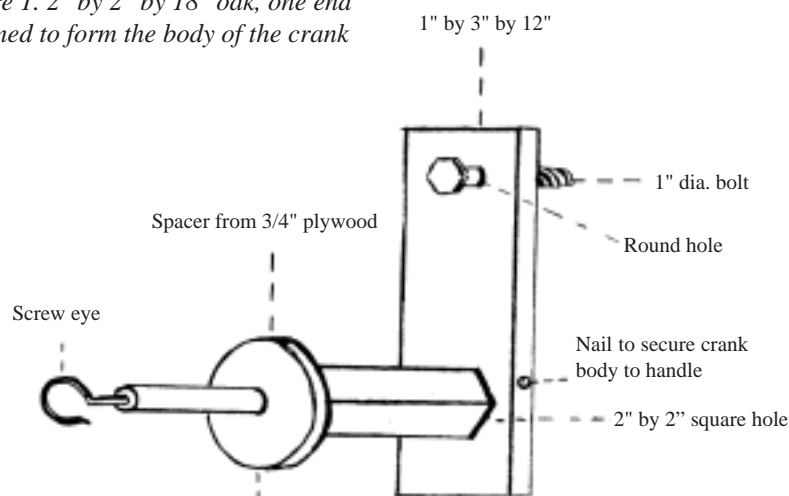


Figure 2. An assembled “rope machine”

Sure, you’ll find quite a bit of this used twine valuable enough any time you might need a piece of string. But unless you either are a very small scale operator or have truly capacious string requirements, you’ll still have plenty of used twine always available. Which is where this nifty idea comes in.

While this does require two people to operate, the work is extremely simple, easy, and fast. You can produce rope of high quality with very minimal practice, and you’ll find it impossible to distinguish it from the hardware store stuff.

You won’t need much to quickly produce such high quality rope either. Just a simple crank, put together as shown; a solidly embedded fence post or similar sturdy upright; and the two people already mentioned.

When putting together my own “rope machine,” I used an 18-inch long piece of rough sawn two by two-inch oak for the body of the crank. A 12-inch long piece of one by three-inch hardwood taken from an old skid was used for the crank, with an old 1-inch diameter bolt for the handle, with a spacer cut from a scrap of 3/4-inch

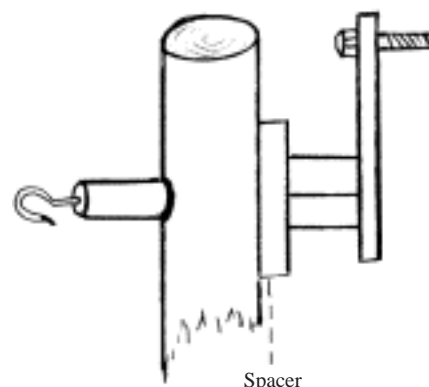


Figure 3. The crank attached to a fence post

plywood. All of which worked out just as well as anything.

Since that time however, I’ve seen similar “rope makers” put together from galvanized water pipe. While these worked with no greater or lesser efficiency, they were obviously much quicker to produce and put into use. Of course many other materials could be utilized, with equally excellent results.

At any rate, once you’ve finished putting together this simple hand

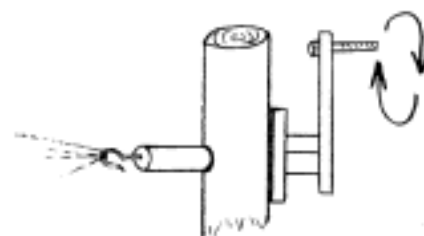


Figure 4. Attach different length pieces of twine then crank the handle

crank, you’ll just need to drill an appropriate sized hole through a fence post or other sturdy upright, and insert the crank. Then you’ll be ready to turn all of those left over straw strings into high quality rope.

One small caution might need to be addressed here however. While I have found that either the regular plant fiber twine, or the newer plastic twine, will both twist into perfectly usable rope when used separately, I’ve also found that I can never achieve even,



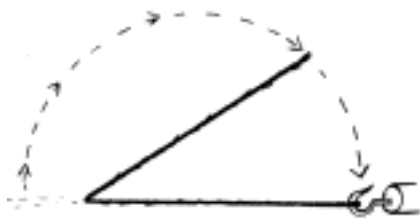


Figure 5. Fold twisted line in half and attach opposite end to crank also...

decent results if I try mixing the two types together in the same rope.

You can use as many strands as you wish when twisting rope with this "machine." I prefer using either three or four strands, but I know of other folks who feel as if they achieve better results with different numbers of strands. So maybe it would be best if you experimented a little until you find your own set of preferences.

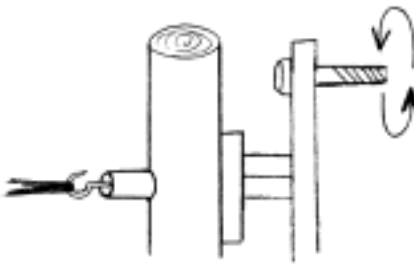


Figure 6. ...then crank the handle in the opposite direction

Simply attach the strands to the protruding end of the crank, as shown, being certain to vary the lengths of the strands. Now, as one person turns the crank handle, the other sort of pinches the strands together, which allows them to twist tightly together. Keep adding new strands as necessary, allowing at least a 6-inch overlap each time a new strand is added, with the person squeezing the strands together continually backing away from the crank as the strands are tightly twisted.



Figure 7. Allow 6 inches overlap when adding twine

Once a length equal to approximately two and a half times the desired length of your rope has been achieved, you'll need to tie, or otherwise attach, your crank handle to the post so that it can't spin freely and allow your "almost rope" to untwist. Next, the person who's been manning the crank needs to walk out to the middle of this length of twisted twine and hold this mid section in place while the one



Figure 8. Whip or tape the end of the rope, about an inch back, then cut it free

who's been twisting the cords walks up and attaches the other end to the crank, folding the rope in progress in half.

Hang on tightly to what is now the end of your rope, as the strands begin twisting themselves together. Once this self twisting process stops, walk back up near to the crank. Again, as one of you squeezes these strands together while backing slowly away, the other keeps rotating the crank handle, winding these strands very tightly together **but** cranking in the opposite direction from the one originally used.

Now just tape, whip, or wire the rope about five or six inches away from the end of the crank. Then cut the newly fashioned rope loose from the crank, and you're finished.

After the first couple of attempts, you'll find that it rarely requires more than 10 minutes to twist together a 100 feet or so of excellent half-inch rope. Considering this very minor investment of time, along with the "left over" nature of your material, it makes for a pretty profitable undertaking. With a strength and appearance roughly equal to mass-produced rope, this seems like a pretty appealing little skill to develop as well. Δ

### Random Beauty

*I do not recognize  
these flowers,  
straight rowed and patterned,  
their scents scare me.*

*I like the oaks  
aged and twisted,  
heavy limbed and creaking,  
nesting newborn starlings.*

*I like the persimmons  
catching boyish hands,  
puckering their mouths,  
running them in circles.*

*I like the matted grass  
of deer beds,  
melting pale green  
patches in the field.*

*I like brown eyed susans,  
hiding in the grass,  
dancing wild in the wind,  
peeking when they want.*

*But these flowers  
perfect, yellow, pink  
stemmed in bare black dirt  
worry me.*

**Cheryl Denise  
Philippi, WV**

### Chinook

*when the chinook*

*blew in  
March*

*in roofs  
from cow sheds*

*sailed into the sky  
in South Dakota*

*twisting and turning*

*like kites  
with broken tails*

**Sheryl L. Nelms  
Forth Worth, TX**

## Understanding paint and stain

*By Harry G. Nemec*

All house paint consists of pigment, resins and vehicle. The vehicle is the liquid that keeps the pigment and resin from completing the chemical reaction that occurs when paint is applied and exposed to the effects of air. The duty of resin is determined by the purpose of the paint, that is, interior paint does not require the durability demands of exterior paint. The pigment, of course, determines the color.

There are significant differences between latex and oil paint, primarily in the vehicle. Mineral spirits are used in the conventional oil paint while latex paint has water as its main vehicle. Copious amounts of the vehicle permits cleanup while lesser amounts are used for thinning. It should be remembered that thinning from the can will affect the coverage and durability and is not recommended.

The following are some key things to remember: Use paint straight out of the can. Modern paint can be used in this way as opposed to the old days when paint had to be mixed and thinned for the job. Woodwork enamel can be found in both latex and oil and they are just about equal in quality when fully cured. Latex paint must fully cure before it is equal to its oil counterpart. Latex paint acts like a thin coat of rubberized material when partially dried and can be pulled off the surface if not properly cured. It should not be touched by anything, including a paint brush, once it's applied. Oil paint will smear or be marked by whatever touches it until it is cured. Drying and curing time for latex paint depends on the humidity, but oil paint is unaffected by humidity. Its drying characteristics are controlled by the solvent or vehicle evaporation time and the chemical reaction of the ingredients. Generally, latex

paint breathes and reacts to moisture content in the air. Oil paint retains its resiliency and is not affected by air moisture.

For general residence painting, either paint is a good choice, but do not put an oil paint over old latex and do not paint any surface that is not properly prepared. When new paint is coated over old peeling or blistered paint, the new paint is wasted.

Surface preparation is the key to a long-lasting job. This preparation includes wire brushing to remove chalking or flaking paint, and a scraper might also be necessary when dealing with blistering or peeling paint. Blistering paint is a sign of moisture from within the painted surface. Water is trying to escape and has reached the paint which it cannot penetrate, so it collects there until it can breach the seal of the paint. Correcting the moisture problem probably will be necessary before any painting is undertaken.

I have purchased a lot of paint in the past as part of renovating old houses and always try for the best bargain. I never paint an interior to match drapes or for any other decorating reasons. I paint because it is necessary to hide something or to protect something.

I go to the stores that custom mix colors, where paints mixed incorrectly have been rejected by customers. Once, after buying a 10-room house that needed painting, I visited a store that had gallons of mis-mixed paint. I needed four gallons per room, and these four gallons all had to be about the same color to mix together to make one color. The labels also all had to be the same in order to guarantee that they would mix. For instance, I selected peach, beige, and yellow in the same label. I offered a dollar a can for all 30 gallons of rejected paint, and the store manager was happy to get rid of the paint to free up the store space.

I got nearly \$400 worth of paint for \$30 or so.

Paint and stain are similar except there is less resin and more vehicle in stain. The pigment in each is equally fine as emulsion. However, because of the different amounts of resin and vehicle, the pigment in stain will settle sooner than the pigment in paint.

Stain color usually is associated with refinishing an existing surface with the same color or in making one type of wood appear as another. Walnut stain will restore a walnut surface but it will also turn pine to "walnut" color.

I make my oil stain with good oil paint along with thinner and some boiled linseed oil. I mix it until it is ready to be put on a test piece, usually a scrap of wood. I mix latex stain using the material that is found on the inside top of a can of unstirred latex paint, and to that I add a little of the unstirred material. I add water a little at a time until I have the color and consistency I want.

Wood absorbs water so care must be taken when using water-based stain on dry wood. Once the wood absorbs the stain you will not get it out. Oil stain is not absorbed by wood. The oil floating the pigment goes into the pores of the wood, and the excess oil and pigment is wiped off. The oil stain permits more control in maintaining the desired color and won't darken when it dries. Latex stain has the property of darkening in the drying process. Either stain can be applied with a roller, brush or rag.

For oil-based paint, cleanup of the skin, most usually the hands and wrists, I apply a few drops of liquid soap before starting painting, and rub it in until "dry." The oil-based paint does not "cut" the soap. When the painting is done, a long rinse with water, after an initial application of paint thinner, mixes with the latent soap, and a mild washing results in clean hands. Δ